Senate Budget and Fiscal Review—Denise Ducheny, Chair

SUBCOMMITTEE NO. 4 Agenda

Senator Mark DeSaulnier, Chair
Senator Tom Harman
Senator Gloria Negrete McLeod
Senator Roderick Wright

Thursday, March 26, 2008
9:30 a.m. or Upon Adjournment
Room 112

Consultant: Bryan Ehlers

Governor's Reorganization Plan No. 1 (Information Technology) Introduced to the Legislature on March 10, 2009

Table of Contents **Page**

Pursuant to the Americans with Disabilities Act, individuals who, because of a disability, need special assistance to attend or participate in a Senate Committee hearing, or in connection with other Senate services, may request assistance at the Senate Rules Committee, 1020 N Street, Suite 255 or by calling 916-324-9335. Requests should be made one week in advance whenever possible.

Governor's Reorganization Plan (GRP) #1 – Information Technology (IT) Consolidation

On March 10, 2009, the Governor submitted to the Legislature his plan (also known as GRP #1—see Appendix H for the full text) to consolidate various statewide IT organizations and functions under the Office of the Chief Information Officer (OCIO). According to the Administration, GRP #1 is premised on the notion that, while IT permeates all aspects of state government, California IT lacks the broad and cohesive organizing logic necessary to best optimize limited state resources. In answer to this problem, the Governor proposes a "federated" governance model, in which the OCIO would enjoy enhanced authority over various IT services and functions while leaving some "local control" at the agency and department levels. In addition to improved service, the Administration anticipates the increased IT coordination and efficiency made possible under the reorganization plan would generate an estimated $1.5 billion in savings over the next five years. Figure 1 below contains a brief overview of the key components of the plan.

Figure 1

IT Organizations and Functions Proposed for Consolidation

Organizations	Positions*	Funds* (in millions)
Office of the Chief Information Officer (OCIO)	34	$7.1
Department of Technology Services (DTS) – including the Technology Services Board	801.8	$278
Department of General Services, Telecommunications Division (DGS-TD)	368	$223
Office of Information Security and Privacy Protection (OISPP) – information security functions	6	$1.5

*As authorized by the Budget Act of 2008.

Functions	Currently Performed By:
Enterprise (Statewide) IT Management	None
Enterprise (Statewide) Information Security	OISPP
Data Center & Shared Services	DTS
Unified Communications Services (voice/video/data networks and radio systems)	DTS & DGS
IT Human Capital Management	OCIO & DTS
IT Procurement Policy	DGS
Broadband & Advanced Communications Services Policy	Business Transportation & Housing Agency (BT&H)

A Note on Process

Pursuant to the government reorganization process specified in statute (see Appendix A), the Legislature has 60 days to consider the Governor's IT reorganization plan. During the first 50 days, the plan may be heard in standing committee, after which time (or following an earlier committee report), a resolution, by floor motion, may be made for dispensing with the proposal "as is" (i.e. without amendment). Barring action by either house to deny it, the plan would take effect May 10, 2009—on the 61st day after the date of submission to the Legislature (March 10, 2009).

Staff notes that the GRP process described above limits legislative flexibility by requiring a proposal to be considered "as is." To the extent that the Legislature might wish to amend the proposal, one or both houses would have to deny the plan by majority vote and then take up a bill to amend the relevant statues. However, in weighing this option, the Legislature should bear in mind that a government reorganization cannot take effect through an urgency statute, and therefore any alternative plan would not take effect until January 1, 2010, more than seven months after the effective date of GRP #1. Therefore, members must weigh whether any risks associated with the Governor's plan (which, through a more flexible process, could be amended by the Legislature) would be outweighed by the benefits of early enactment.

The Existing IT Governance Structure

As summarized above, GRP #1 proposes consolidating multiple state IT organizations and functions, currently distributed across various entities, under an expanded OCIO. The following is a brief description of the existing IT governance structure (Appendix B provides the historical context for how this structure came into being):

- **OCIO** – The OCIO was established in 2006, augmented in 2008, and is responsible for many activities, including developing and enforcing the state's IT plans, policies, and standards; conducting IT project review, approval, and oversight; and promoting the efficient and effective use of IT in state operations. The Chief Information Officer (CIO) is a member of the Governor's Cabinet and advises the Governor on the strategic management of the state's IT resources.
- **DTS** – The DTS was established when the Teale Data Center and Health & Human Services Agency Data Center were consolidated under a previous reorganization in 2005. As part of the State and Consumer Services Agency (SCSA), DTS provides IT services to state, county, federal, and local entities throughout California on a fee-for-service basis. Technology services include application and equipment hosting, storage, computing, networking, and training.
- **Technology Services Board (TSB)** – The TSB was also established as part of the 2005 data center reorganization and it governs DTS, setting policy on services provided by the department, and reviewing and approving DTS' annual budget and rates. The TSB is chaired by an appointee of the Governor (currently the CIO), and consists of top executives from all Cabinet agencies and the State Controller's Office.
- **OISPP** – The OISPP, also within SCSA, is made up of two offices. The Office of Information Security is responsible for ensuring the confidentiality, integrity, and availability of state systems and computer applications and for protecting state

information. The Office of Privacy Protection promotes and protects privacy rights of consumers.

- **DOF** – The DOF has responsibility for establishing and enforcing state IT strategic plans, polices, standards, and enterprise architecture, including the periodic review and maintenance of the information technology sections of the State Administrative Manual, except for sections on information technology procurement, information security and information technology fiscal policy. Additionally, the DOF performs fiscal oversight of the state's information technology projects.
- **DGS** – The DGS has responsibility for actual procurement of IT procurement policy and procedures, and is home to the Telecommunications Division, which provides engineering and technical support services for public safety-related communication systems. DGS-TD consists of (1) the Office of Public Safety Communications Services, which provides engineering and technical support services for public safety related communications systems; and (2) the 9-1-1 Emergency Communications Office, which provides oversight of the 9-1-1 network and approximately 500 police, fire, and paramedic dispatch centers.
- **BT&H** – The Governor designated the BT&H as the lead coordinator for implementing broadband policy in a late-2006 executive order.

The Proposed IT Governance Structure

GRP #1 would consolidate most of California's existing IT governance structure under the OCIO. Notably, IT procurement and security policy would be transferred out of the DOF and OISPP, respectively, while provision of data center and telecommunications services would shift to the OCIO from the DTS and DGS-TD, respectively. All told, the OCIO would absorb approximately 1,200 state employees (see Appendix C for a revised organizational chart) and $500 million in funding from other departments. These resources would be put to use under a new "federated" IT governance model.

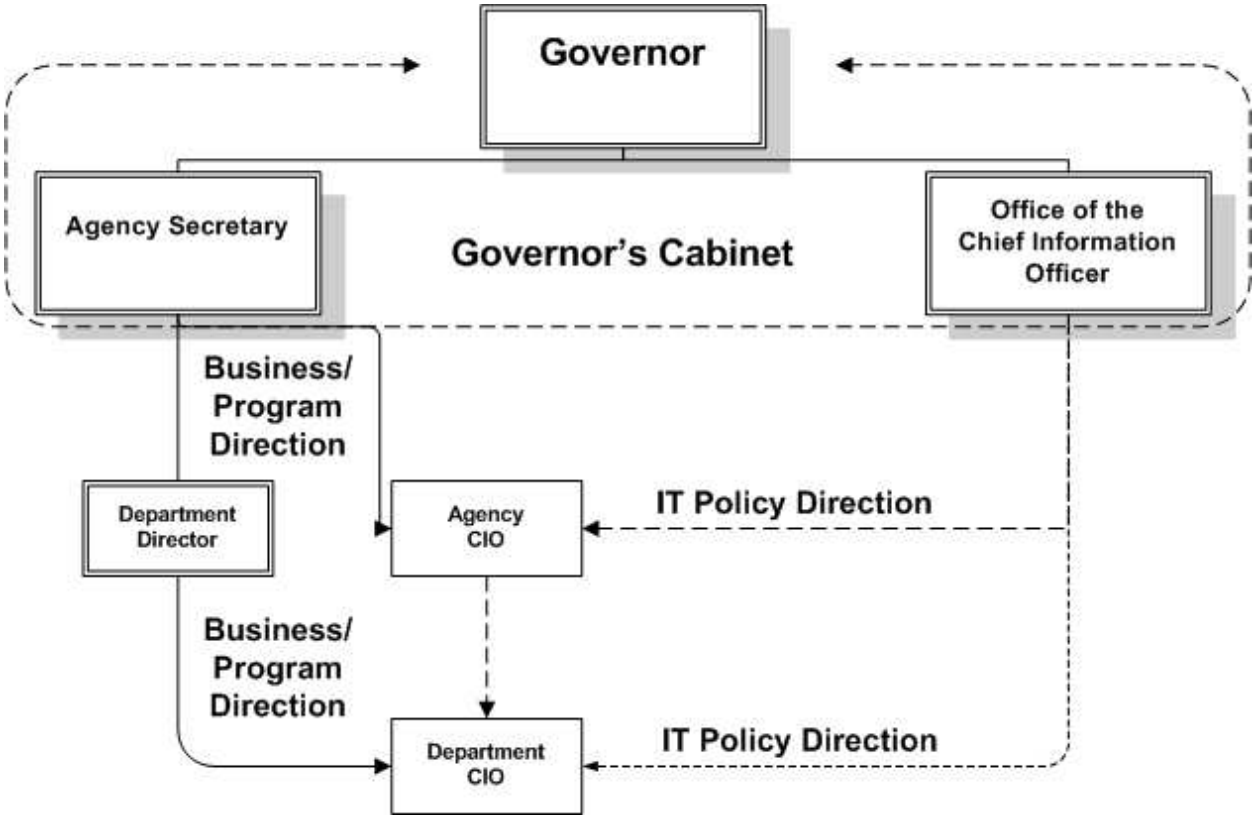
The Administration describes a "federated" IT governance model as follows:

> *Federated IT governance establishes the relationship among the Agencies, departments, and the state CIO. The federated governance model maintains the authority of agencies to manage program-specific IT processes and systems. IT functions that are common across the entire state are managed at the enterprise* [statewide] *level for all agencies by the central IT organization. The federated governance model confirms that programmatic needs are the primary drivers for IT decisions and acknowledges the importance of IT as an enabler of agency success.*

Put another way, within the federated IT governance organizational chart, the state CIO would have a "dashed" (as opposed to a solid) line of authority to the Agency and departmental CIOs (see Figure 2 below). Agencies and departments would be obliged to follow statewide IT "direction" (e.g. new procurement and data center policies) set by the OCIO, but would not be required to seek or obtain OCIO approval for all IT decisions. For example, agencies would continue to provide program policy and direction, prioritize Agency IT investments, and carry out consolidation of IT resources to reduce operational costs. Likewise, departments would provide local desktop/LAN

support, manage business specific applications and purchase IT resources necessary for department activities.

Figure 2 – Federated IT Governance Framework



Staff notes that the proposed governance model is a compromise between a fully centralized, "top-down," command and control model—in which a single IT executive controls all IT assets and oversees all IT decisions statewide—and a decentralized model—in which strategy and policy setting authority is highly diffuse and IT decisions are largely (or entirely) delegated to lower levels of government (and away from the executive). As described in Appendix A, California has gradually consolidated its IT governance structure over the last several years (consistent with recommendations from several outside organizations), and it is safe to say that the proposed reorganization would move the state farther along the continuum toward centralization than at any time since the closure of the Department of Information Technology (DOIT), though significantly shy of total command and control.

The Administration's Case for the Reorganization

As discussed at greater length in the Staff Comments, GRP #1 is a response to a perceived problem. The Administration is essentially arguing that California's approach to IT is considerably less efficient and effective than it could be and that a consolidation of IT authority and function would: (1) increase coordination and operational efficiency, allowing redundant equipment and activities to be eliminated, thereby reducing costs; and (2) promote streamlining of services in order to significantly improve their availability and quality.

While some evidence of an IT governance problem remains anecdotal or is most evident in the form of struggling IT projects, since her arrival in California, the CIO has endeavored to take a full accounting of the state's IT activities in order to put hard data behind the effort to identify root causes. To this end, the OCIO conducted a statewide survey in May 2008 in order to establish an IT baseline. Key findings of the survey included the following:

Top Line Information

- Operating expenditures of more than $3 billion annually.
- 130 individuals serving as CIOs or in an equivalent function within state agencies.
- More than 10,000 authorized positions in IT classifications (annual payroll/overhead in excess of $1.5 billion).

IT Projects

- More than 120 large IT projects under development with estimated budgets exceeding $6.8 billion over 11 years.
- More than 500 small to medium IT projects under development.

IT Human Capital

- More than 50% of the state's IT workforce will be eligible to retire within the next five years.
- Existing IT leadership capabilities require further development.
- Deferred spending on workforce development has resulted in skill gaps and shortages in key areas (e.g., project management and business analytics).

IT Infrastructure - Data Centers, Servers and Storage

- The state has approximately 409,000 sq. ft. of floor space in 405 locations dedicated to data centers and server rooms.
- Approximately 33 percent of data center floor space lacks sufficient disaster recovery and backup capabilities.
- The state owns and operates more than 9,494 servers. More than a third of these servers are at, or near, end of life (3+ years old).
- Agencies are operating 259 storage systems (159 Storage Attached Network (SAN) systems and 100 Network Attached Storage (NAS) systems).

IT Infrastructure – Desktop

- More than 200,000 desktops/laptops in use by Executive Branch agencies, with a refresh cycle ranging between three to five years.
- The average desktop in use requires 4 to 16 times more energy than a laptop computer operating with advanced power management.
- More than 100 different e-mail systems.
    - 180,000 active e-mail boxes.
    - 75 terabytes of storage (75,000 gigabytes).
    - 15 million e-mails per day.

IT Security

- Explosion in e-mail spam – ~95% of the e-mail the state receives each day is spam.

- The state's network vulnerability is projected to increase by more than 800 percent by 2018 if we maintain the current operating model.

Staff notes that the above findings provide a preliminary understanding of how the state uses IT and where it spends IT dollars, but California still lacks a complete and comprehensive accounting of all IT activities and expenditures (for example, neither the OCIO nor the DOF know exactly how much the state spends on independent IT contractors). However, notwithstanding this ongoing need for better data, the OCIO took the information gathered from the survey and reached the following conclusions, which inform GRP #1:

- *The State maintains a significant number of IT facilities, equipment, and staff across individual organizations. This provides an opportunity for consolidation, particularly with e-mail services.*
- *The State could improve governance, stakeholder buy in, and communication of IT investments by standardizing reporting relationships as well as roles and responsibilities within state agencies for setting IT priorities.*
- *The State could improve the management of IT resources by increasing the centralization of services.*
- *State data centers are a prime target for efforts to improve energy efficiency.*
- *Web and e-mail security threats are increasingly sophisticated.*

Based on these findings, the Administration developed GRP #1 and identified approximately $1.5 billion in cost savings and avoidances to be achieved over the next five years through consolidated contracts, servers, and data center space, strategic sourcing improvements, enhanced spending control, and reduced reliance on costly independent oversight contracts, among other things. Appendix E contains the line item breakdown of the cost savings and avoidances provided by the Administration, while Figure 3 below provides a high-level summary according to fund class.

Figure 3

DOF Estimate of IT Reorganization Savings Over Five Years (in millions)

Fund Type / Cost Avoidance or Savings	2009-10	2010-11	2011-12	2012-13	2013-14	Five-Year Total
General Fund (GF) Savings*	($86.2)	($94.9)	($96.5)	($98.2)	($98.2)	($473.9)
GF Savings & Avoidance	$102	$137	$208	$235	$244	$926
Other Fund Savings & Avoidance	$83.5	$112.1	$170.2	$192.3	$199.6	$757.6
All Savings & Avoidance	$185	$250	$378	$427	$444	$1,684

*Parentheses indicate non-add, as GF savings are already included in the "GF Savings & Avoidance" row.

Additional discussion of the savings estimates displayed above follows in the staff comments below; however, staff notes the following here:

- The GRP document submitted to the Legislature on March 10, 2009, did not contain any costing data. All of the above information (save for the $1.5 billion estimate over five years) has been provided in subsequent responses to legislative staff questions.
- At the time of this writing, the Legislature still lacked sufficient back-up detail from the Administration to validate the savings estimates provided.
- To date, the Administration has not articulated a plan for capturing or "scoring" the estimated savings.
- The savings identified above generally "ramp up" over the five-year period of the estimate because many benefits of the policy changes envisioned under the GRP would only accrue to the state in the out years when, for example, existing equipment would reach its end of lifecycle and be up for replacement.

Legislative Analyst's Office (LAO) Analysis

On March 9, 2009, the LAO transmitted its comments on GRP #1 to the Little Hoover Commission (see Appendix F for the full text) expressing guarded optimism that the planned consolidation could result in greater alignment of IT services and resources and produce some IT-related efficiencies and improvements on a statewide level. However, the LAO: (1) noted concern with the plan's overall lack of detail regarding implementation; (2) questioned the absence of a project management component; and (3) cautioned—as it has in the past on matters of IT governance—against the state taking on unnecessary risks by proceeding too rapidly with too many changes all at once. These issues and many others are examined below in the Staff Comments.

Staff Comments

GRP #1 represents one possible solution to a specific problem. In trying to assist the Legislature in determining whether GRP #1 is the *right* solution to the *right* problem, the staff comments below attempt to break down the Governor's proposal into "bight-size" chunks (without losing the "forest for the trees") and to raise questions based on fundamental analytical concepts and California's past experiences with IT. Logically, the comments begin by examining whether the Administration has appropriately defined the problem.

- **Problem Definition** – As noted previously, the Administration is essentially arguing that California's approach to IT is considerably less efficient and effective than it could be and that a consolidation of IT authority and function would (1) allow redundant staff activities to be eliminated, reducing costs; and (2) promote streamlining of services in order to significantly improve their availability and quality. This is not a new argument, and a significant number of pages have already been devoted over the past decade to investigating the issue in reports and analyses by the LAO, RAND, and the Little Hoover Commission, to name a few.

While it suffices to say here that there is general agreement among experts that California can and ought to more effectively and efficiently manage state IT, there is some divergence of opinion on how to confront the tradeoffs associated with any particular plan. For example, the Little Hoover Commission has come out aggressively in favor of consolidating virtually all IT authority under a strong OCIO. Few argue that this would generate greater efficiency of a certain kind; however, in a 2003 report on IT governance prepared on behalf of the California Bureau of State Audits, RAND pointed out that with consolidation (and the attendant standardization of policy and procedure) comes risk of potentially undesirable impacts like reduced equity of process in procurement, and/or a chilling effect on collaboration and innovation at lower levels of organization (where consolidation is experienced as disempowerment). In fact, RAND found that different states (including New York, Illinois, Virginia, and Pennsylvania) have managed to achieve IT governance success under a variety of governance models—including vesting widely divergent amounts of explicit authority in an IT executive.

While RAND recommended that California pursue a more "consolidated control" approach in the near term (discussed in more depth in Appendix D), its analysis should serve as a warning against any rush to embrace "silver bullet" solutions. To the contrary, the RAND findings suggest that the path to effective IT in state government requires a keen understanding of existing organizational structures and their political implications, as well as a thoughtful balancing of objectives and methods in changing those structures.

With this in mind, the Committee should carefully consider, and may wish the Administration to respond to, the following questions:

1. Specifically and succinctly, how does the Administration define the problem? Does the Administration's definition of the problem permit the proposed solution to be measured (either quantitatively or qualitatively, or both)? Performance measures are discussed in more depth below, but before allowing the GRP to take effect the Legislature should be satisfied that the proposed solution is not simply defined into the problem (for example, California's IT governance is insufficiently consolidated; therefore, we need more consolidation).

- **Performance Measures** – As noted above, the proposed solution to the state's IT "problem" should be measurable. Otherwise, how will we know if we're successful? Staff notes that, as submitted, GRP #1 does not contain a timeline (or milestones), nor does it identify a comprehensive set of performance metrics (with a starting baseline). In subsequent conversations with staff, the OCIO has provided an example of metrics applicable to a broad set of IT objectives (see the OCIO "Balanced Scorecard" contained in Appendix G); however, the Legislature still lacks the detail necessary to conduct proper oversight if the submitted plan were to go forward as submitted. Therefore, the Committee may wish for the Administration to respond to the following questions:

    2. How long will it take to implement the proposed changes to California's IT governance, and by what milestones will we know progress is being made? When do we anticipate these interim milestones will be reached?

3. What specific metrics (both quantitative and qualitative) does the OCIO intend to apply to the reorganization process? Why are these metrics appropriate and what do they tell us?
4. For each metric, where are we today? What is the baseline against which the GRP's success would be measured?
5. How do the metrics chosen tie to savings estimates? For example, we anticipate cost avoidance due to reduced data center square footage, but what is the target level of square footage that must be achieved to realize this estimate? In a broader sense, on what assumptions do the Administration's savings estimates rest?
6. How does the Administration plan to "score" the savings? For example, what portion would be taken out of department and Agency budgets by reducing their appropriations, and what portion does the Administration propose to redirect?
7. How and when does the OCIO intend to report to the Legislature on the outcomes associated with each of the metrics identified above? Will we have the basis for a coherent ongoing dialogue on California IT governance as we move one, two, or five or more years down the road?

- **Risk Analysis** – Not surprisingly, the Administration has spoken with great certitude on the feasibility of GRP #1; however, any plan has risks, and the Legislature should be familiar with the risks of the Governor's plan before permitting it to take effect. Similarly, in order to properly weigh the GRP's risks and benefits, the Legislature should seek to better understand the risks associated with the status quo.

  Staff notes that the plan submitted to the Legislature includes no formal risk analysis and only scant anecdotal reference to risk of any kind (associated with the plan, the status quo, or otherwise). In testimony before Assembly Budget Subcommittee #5 on March 17, 2009, and in conversations with staff, the Administration has emphasized the degree to which participating organizations have already discussed and mitigated potential threats to successful completion of the plan, but has been less verbose in talking about the challenges (i.e., the risks) facing the plan.

  Given California's troubled past regarding IT governance, and the existence of an entire cottage industry whose existence owes itself to the difficulty of "change management" (particularly with regard to organizational culture), the Committee may wish for the Administration to respond to the following questions:

  8. Over the implementation period of GRP #1 (five years?), what are the objective risks of the status quo (i.e., the current IT governance structure)?
  9. What are the risks of the proposed plan—in which almost 1,200 state employees would report to a new boss? What are the challenges, particularly with regard to changing the culture among the current employees of DTS and DGS-TD? For example, one of the reasons for the proposed consolidation of authority is to drive changes in the way data center services are provided in order to improve efficiency and obtain savings (by moving away from a model in which "customer service" comes first regardless of cost). If this kind of culture change could not be accomplished under the current governance structure (at the urging of the CIO), what makes the Administration think that behaviors will suddenly change in the second week of May simply because

there's a new boss at the top of the organizational chart (who is now "directing" instead of urging)?

10. How does the Administration intend to mitigate the risks associated with the GRP? What specific resources (for example, personnel experienced in successful, large-scale change management) does the Administration plan to bring to bear in the mitigation efforts? How does the OCIO plan to mitigate frustration from departments (and Agencies), who are accustomed to getting exactly what they want with regard to IT, when they start to hear "no" from the OCIO? (For example, how were these issues managed when the data centers merged under DTS?)
11. What alternative solutions to California's IT problem did the Administration consider and dismiss, and why?
12. The LAO has noted concern with the scope of the plan relative to an apparently rapid implementation period, and has suggested that the state might be better advised to prioritize each component of the reorganization in order to take a more deliberate, phased approach (with some components to be implemented immediately and others to wait until future years). How does the Administration respond to this proposal? What are the strengths and weaknesses of this concept? Why shouldn't California take the "slow and steady" approach given what we know to be the costs of past IT governance failures (see more below on "lessons learned" from DOIT)?

- **Standardization and Centralization v. Flexibility and Autonomy** – As noted in the RAND report discussed in Appendix D, organizational consolidations are fraught with tradeoffs, most notably: (1) standardization of policy/procedure vs. flexibility; and (2) centralization of authority vs. autonomy. Additionally, the type of consolidation proposed by the Governor, also poses issues with regard to equity of process and outcome (particularly with regard to procurement). Therefore, the Committee may wish for the Administration to respond to the following questions:

13. For each organization and/or function proposed for consolidation, what is the anticipated benefit (in terms of savings, service, or any other reasonable standard)? How do the various components complement one another as a package?
14. What are the tradeoffs or drawbacks implicit to the particular IT governance solution proposed (for example, loss of flexibility/autonomy at lower levels of government, or decreased equity or competition in procurement)? How do these tradeoffs compare to other alternative solutions that the state might otherwise consider?
15. Do the benefits outweigh the costs either quantitatively or qualitatively (or both)? It does not appear that the Administration prepared a formal cost-benefit analysis for this proposal, but presumably it went through the thought process, so what important insights or conclusions came out of that process?
16. Increased consolidation and standardization are expected to increase the state's leverage over procurements (indeed, are necessary to achieve some of the projected cost savings). This will almost certainly increase the size of some (even most?) procurements such that some smaller vendors may have more difficulty competing in the new procurement environment. How does the Administration anticipate procurements will be affected, and how will it strike a balance between ensuring equity in the process while seeking the best possible price for the state?

- **Lessons Learned** – California has long struggled to establish effective IT governance; however, it is not entirely clear how the Governor's plan makes use of past lessons learned and whether it actively seeks to avoid repeating previous mistakes. The Committee may wish for the Administration to respond to the following questions:

    17. What lessons learned from DOIT (or other California experiments in IT governance) are evident in GRP #1?
    18. As proposed, the CIO would still have only a "dashed" line of authority over Agency and department IT. Overall lack of authority was one of the identified weaknesses that led to the downfall of DOIT. How does the CIO envision the "dashed" line would work in practice? How is the proposed model significantly different than the DOIT model? Why would it work any better?
    19. IT project management is another identified weakness in California, yet this issue is addressed solely through a separate budget request for four new positions (to create a new Office of Project Management under the CIO), and not at all by the GRP. Why is a project management component absent from the GRP given the fact that: (1) there is broad consensus around the lack of effective IT project management; (2) there are major cost implications associated with project mismanagement; (3) there are major service implications when California cannot meet the needs of its citizenry through IT; and (4) there are major political implications to the ongoing perception that California just "can't get it right" when it comes to IT?
    20. The LAO raises the absence of a project management component to the GRP as a potential lost opportunity, and suggests that the Legislature consider reassigning staff (after they complete their current projects) from the Office of Systems Integration (OSI) to projects with the highest statewide priority. (Note: The OSI is currently housed within, and is dedicated to projects for, the Health and Human Services Agency.) Notwithstanding the fact that the OSI statutes cannot be amended through the GRP process, how would the CIO use OSI resources to address struggling projects like 21st Century and FI$Cal? How does the CIO plan to keep these projects on course without these resources?
    21. How is the GRP informed by public sector best practices? For example, when the OCIO was created two years ago, the Administration insisted, against the advice of the LAO, that IT security must reside in a separate agency. This was cited as an "industry best practice." Now, the same Administration is proposing to move IT security under the OCIO, again citing "best practices." How should the Legislature reconcile this seeming flip-flop?

- **Other Issues of Concern** – The Committee may wish for the Administration to respond to the following questions related to specific components of the GRP:

    22. In the past, this Subcommittee has heard lengthy testimony as to the ongoing challenges of maintaining state-of-the-art, interoperable **telecommunications**, particularly for law enforcement and first-responders. Where does the OCIO see this issue in terms of the priorities of the GRP, and how will it be addressed? What roll does the OCIO plan to play in the selection and procurement of specific technologies?

23. One of the functions proposed for consolidation is "**human capital management**." As noted above, state government suffers from a lack of highly-skilled IT professionals. Could the OCIO briefly describe the changes that would be implemented under the GRP with regard to IT human capital?
24. Both of the functions enumerated immediately above (telecommunications and human capital management) would be overseen, along with Geospatial Information Systems, Enterprise Architecture, and Enterprise Solutions & Services, by a single head of a new Enterprise Services Office (ESO)—see Appendix C. How does the OCIO anticipate the ESO would prioritize telecommunications (i.e., public safety and 9-1-1 communications) and human capital amid this multiplicity of responsibilities?
25. The GRP proposes shifting authority over broadband to the OCIO. How might shifting the lead broadband agency affect the state's ability to successfully pull-down federal economic stimulus dollars in this area?

Appendix A – The Government Reorganization Process Set Forth in Code

CALIFORNIA CODES
GOVERNMENT CODE
SECTION **12080**-12081.2

12080. As used in this article:

(a) "Agency" means any statewide office, nonelective officer, department, division, bureau, board, commission or agency in the executive branch of the state **government**, except that it shall not apply to any agency whose primary function is service to the Legislature or judicial branches of state **government** or to any agency that is administered by an elective officer. "Agency that is administered by an elective officer" includes the State Board of Equalization but not a board or commission on which an elective officer serves in an ex officio capacity.

(b) "Reorganization" means:

(1) The transfer of the whole or any part of any agency, or of the whole or any part of the functions thereof, to the jurisdiction and control of any other agency; or

(2) The abolition of all or any part of the functions of any agency; or

(3) The consolidation or coordination of the whole or any part of any agency, or of the whole or any part of the functions thereof, with the whole or any part of any other agency or the functions thereof; or

(4) The consolidation or coordination of any part of any agency or the functions thereof with any other part of the same agency or the functions thereof; or

(5) The authorization of any nonelective officer to delegate any of his functions; or

(6) The abolition of the whole or any part of any agency which agency or part does not have, or upon the taking effect of a reorganization plan will not have, any functions.

(7) The establishment of a new agency to perform the whole or any part of the functions of an existing agency or agencies.

(c) "Resolution" means a resolution of either house of the Legislature resolving as follows:

"That the _____ does not favor
(Assembly or Senate)
Reorganization Plan No. _____ transmitted to
(Insert number of plan)
the Legislature by the Governor on _____
(Insert date of transmittal)
and recommends that the plan be assigned to the

_____
(Insert appropriate committee)."

12080.1. The Governor, from time to time, shall examine the organization of all agencies and shall determine what changes therein are necessary to accomplish one or more of the following purposes:

(a) To promote the better execution of the laws, the more effective management of the executive and administrative branch of the state **government** and of its agencies and functions and the expeditious administration of the public business;

(b) To reduce expenditures and promote economy to the fullest extent practicable consistent with the efficient operation of the state **government**;

(c) To increase the efficiency of the operation of the state **government** to the fullest extent practicable;

(d) To group, consolidate and coordinate agencies and functions thereof as nearly as possible according to major purposes;

(e) To reduce the number of agencies by consolidating those having similar functions under a single head and to abolish such agencies or functions thereof as may not be necessary for the efficient operation of the state **government**;

(f) To eliminate overlapping and duplication of effort.

The Legislature declares that the public interest requires the carrying out of the purposes set forth in this section, and that such purposes may be accomplished more speedily and effectively under this article than by the enactment of specific legislation.

12080.2. Whenever the Governor finds that reorganization is in the public interest, he shall prepare one or more reorganization plans in the form and language of a bill as nearly as practicable and transmit each, bearing an identifying number, to the Legislature, with a declaration that, with respect to each reorganization included in the plan, he has so found. The delivery to both houses may be at any time during a regular session of the Legislature. The Governor, in his message transmitting a reorganization plan, shall explain the advantages which it is probable will be brought about by the taking effect of the reorganization included in the plan, and he shall specify with respect to each abolition of a function included in the plan the statutory authority for the exercise of the function. Reorganization plans submitted to the Legislature pursuant to this section shall express clearly and specifically the nature and purposes of the plan or plans.

Upon receipt of a reorganization plan, the Rules Committee of the Senate and the Speaker of the Assembly shall refer the plan to a standing committee of their respective houses for study and a report. Such report shall be made at least 10 days prior to the end of the 60-day period described in Section **12080**.5 and may include the committee's recommendation with respect to a resolution.

A resolution, by floor motion, as defined in subdivision (c) of Section **12080**, may only be in order following a committee report or at any time during the last 10 days prior to the end of the 60-day period described in Section **12080**.5. Such resolution shall be voted upon without referral to committee.

12080.3. Each reorganization plan transmitted by the Governor under this article:

(a) May change the name of any agency affected by a reorganization and the title of its head, and shall designate the name of any

agency resulting from a reorganization and the title of its head.

(b) May include provisions, in accordance with Article VII of the California Constitution, for the appointment of the head and one or more other officers of any agency, including an agency resulting from a consolidation or other type of reorganization, if the Governor finds, and in his or her message transmitting the plan declares, that by reason of a reorganization made by the plan the provisions are in the public interest. The head may be an individual or a commission or board with two or more members. In any case, the appointment of the agency head shall be subject to confirmation by the Senate. The term of office of any appointee, if any is provided, shall be fixed at not more than four years. The Legislature shall fix the compensation of all department heads and officers who are not subject to Article VII of the California Constitution.

(c) Shall provide for the transfer of employees serving in the state civil service, other than temporary employees, who are engaged in the performance of a function transferred to another agency or engaged in the administration of a law, the administration of which is transferred to the agency, by the reorganization plan. The status, positions, and rights of those persons shall not be affected by their transfer and shall continue to be retained by them pursuant to the State Civil Service Act (Part 2 (commencing with Section 18500) of Division 5), except as to positions the duties of which are vested in a position exempt from civil service.

(d) Shall provide for the transfer or other disposition of the personnel records and property affected by any reorganization.

(e) Shall provide for the transfer of unexpended balances of appropriations and of other funds available for use in connection with any function or agency affected by a reorganization, as the Governor deems necessary by reason of the reorganization, for use in connection with the functions affected by the reorganization or for the use of the agency that has these functions after the reorganization plan becomes effective. Transferred balances shall be used only for the purpose for which the appropriation was originally made.

(f) Shall provide for terminating the affairs of any agency abolished.

(g) Shall enumerate all acts of the Legislature that will be suspended if the reorganization plan becomes effective.

12080.4. No reorganization plan shall provide for, and no reorganization under this article shall have the effect of:

(a) Continuing any agency beyond the period authorized by law for its existence, or beyond the time when it would have terminated if the reorganization had not been made;

(b) Continuing any function beyond the period authorized by law for its exercise, or beyond the time when it would have terminated if the reorganization had not been made;

(c) Authorizing any agency to exercise any function which is not expressly authorized by law to be exercised by an agency in the executive branch at the time the plan is transmitted to the Legislature;

(d) Increasing the term of any office beyond that provided by law for the office; or

(e) Abolishing any agency created by the California Constitution, or abolishing or transferring to the jurisdiction and control of any

other agency any function conferred by the California Constitution on an agency created by that Constitution.

12080.5. Except as otherwise provided in this section, a reorganization plan submitted pursuant to this article shall become effective the first day after 60 calendar days of continuous session of the Legislature after the date on which the plan is transmitted to each house or at a later date as may be provided by the plan, unless, prior to the end of the 60-calendar-day period, either house of the Legislature adopts by a majority vote of the duly elected and qualified members thereof a resolution, as defined in subdivision (c) of Section **12080**.

As used in this section "60 calendar days of continuous session" shall be deemed broken only by an adjournment sine die, but in computing the 60 calendar days for the purposes of this provision days on which either house is not in session because of a recess of more than 10 days to a day certain shall not be included.

12080.6. No reorganization plan shall have the effect of limiting in any way the validity of any statute enacted, or any regulation or other action made, prescribed, issued, granted or performed in respect to or by any agency before the effective date of the reorganization plan except to the extent that the plan specifically so provides.

As used in this section "regulation or other action" means any regulation, rule, order, policy, determination, directive, authorization, permit, privilege, requirement, designation, or other action.

12080.7. No suit, action or other proceeding lawfully commenced by or against the head of any agency or other officer of the state, in his official capacity or in relation to the discharge of his official duties, shall abate by reason of the taking effect of any reorganization plan under the provisions of this article.

12080.8. From the effective date of a reorganization plan, and as long as it is in effect, the operation of any prior act of the Legislature inconsistent therewith shall be suspended insofar as it is inconsistent with the reorganization plan.

12080.9. Each reorganization plan which takes effect shall be printed in the same volume as the acts of the session of the Legislature to which it was submitted.

12081. The Legislative Counsel shall prepare for introduction not later than the next regular session of the Legislature occurring more than 90 days after that in which a Governor's reorganization plan takes effect a bill effecting such changes in the statutes as may be necessary to reflect the changes made by the reorganization plan.

The purpose of this section is to insure that statutory law is amended to conform with the changes made by the reorganization plan, but failure to enact such a bill shall not affect the validity of the plan.

12081.1. It is the intention of the Legislature in delegating legislative power to the Governor by this article pursuant to the authorization contained in Section 6 of Article V of the California Constitution to retain the right of review of the Governor's action by means of action by either house of the Legislature recommending study of any proposal submitted to it.

12081.2. If any provision of this act or the application thereof, except Section **12080**.5, to any person or circumstances is held invalid, such invalidity shall not affect other provisions or applications of the act which can be given effect without the invalid provision or application, and to this end the provisions of this act, except Section **12080**.5, are severable.

Appendix B – How We Got Here: A Summary of IT Governance from DOIT to Present

The following is a brief summary of recent IT governance structures intended to provide some context for the decision before the Legislature on GRP #1. For the sake of brevity, this background begins with the California Department of Information Technology (DOIT)—and sticks to the highlights of the IT governance conversation over the last decade.

DOIT was created in 1995 in an attempt to bridge the gap between the need to provide more effective state services through IT and a general lack of the leadership, guidance, and oversight necessary to carry out critical IT initiatives. Unfortunately, even before Oracle's 2001 no-bid software contract ended in scandal and effectively sealed DOIT's fate (the department was allowed to sunset the following year), DOIT struggled to meet its statutory mandates. In a review released in 2003 on behalf of the Bureau of State Audits (BSA), RAND summarized DOIT's demise as follows:

> *DOIT faced many challenges, including its composition and organizational placement, an all-encompassing charter to be both an advocate and a control organization, and the inability of state IT stakeholders to collaborate.*

Among the specific areas in which RAND found DOIT lacking were the following:

- ***Planning***—DOIT's inadequate inclusion of or responsiveness to department and agency CIOs in the formulation and revision of a statewide strategic plan resulted in a product that was neither well received nor complete.
- ***Approval***—DOIT's role and responsibilities relative to other control agencies was ill-defined. For example, overlap and ambiguity about the roles of DOIT and the Department of Finance (DOF) relative to project approval and funding eroded trust and confidence from the client departments who came to see the approval process as preferential, arbitrary, and unilateral. The lack of a clear and guiding strategic plan probably contributed to these problems.
- ***Procurement***—In addition to the Oracle debacle, DOIT struggled to set standards in the face of opposition from vendor lobbyists. This reflected the political clout of the vendor community as well as the natural and unavoidable tension between statewide efforts for cost efficiency and effectiveness versus the need for competitive procurement for the sake of equity and public trust.
- ***Implementation & Evaluation***—DOIT was created with the intent of providing project leadership and guidance as well as oversight, but it did not possess the resources (and may not have possessed adequate authority) to undertake such an enormous task. The alternative strategies DOIT employed, for example, using outside contractors (Independent Project Oversight—IPOC; and Independent Verification and Validation—IV&V) were frequently viewed as excessive, redundant, and/or trivial by departments/agencies, not least because they bore the additional costs. Finally, DOIT may never have adequately defined "failure" insofar as no one in state government at the time could remember an instance in which DOIT terminated a project once in progress. That said, even a "failed" project frequently results in a useful system, suggesting that "failed" may be primarily a matter of public (or political) perception.

RAND additionally identified the following "problem areas" related to the environment in which DOIT operated:

- ***Organization & Support***—California interviewees generally agreed that DOIT lacked buy-in and collaboration from other stakeholders, consistent support from the governor's office, and adequate staffing to address all of its statutory responsibilities.
- ***Roles & Functions***—Given limited resources, DOIT may have attempted to tackle too many challenges at once, rather than establish a set of priorities and tackle only the most important issues and challenges, as time and resources permitted. For example, DOIT attempted to set security policy and standards, provide a community forum to address common issues, and advance initiatives from an enterprise-wide perspective, but, in the eyes of constituents/clients, failed to succeed at any of them.

As RAND further noted in the aftermath of DOIT, "there still exists an unsatisfied need for IT governance in California."

With this in mind, and the mantra of "we don't want to create another DOIT," the state moved on. Primary responsibility for IT activities devolved to agencies and departments, while the Department of Finance (DOF) retained budgetary approval and took full control over technical (project) approval. Additionally, DOF worked to produce general IT policies and standards (including security), while Department of General Services did the same with regard to IT procurement. Although California hired a new state Chief Information Officer (CIO), for several years the position was given no staff and lacked any specific authority to govern California IT until Chapter 533, Statutes of 2006 (SB 834, Figueroa) changed some of that by formally establishing the Office of the Chief Information Officer (OCIO) and prescribing the state CIO duties, including: (1) advising the Governor on IT issues, (2) minimizing overlap and redundancy of state IT operations, (3) coordinating the activities of agency information officers, (4) advancing organizational maturity and capacity in IT management, and (5) establishing performance measures for IT systems and services.

Subsequent budget trailer bill language, Chapter 184, Statutes of 2007 (SB 90, Committee on Budget and Fiscal Review) raised the CIO to a cabinet-level position and expanded the powers of the OCIO to include the authority to (1) approve, suspend, and terminate IT projects; (2) establish and enforce state IT plans and policies; and (3) consult with agencies on programmatic needs and IT projects. SB 90 additionally transferred the IT policy-setting and review functions and resources from the DOF to the OCIO, and the information security policy-setting function from the DOF to the State and Consumer Affairs Agency (SCSA). While the LAO supported the fundamental shift of IT governance to the OCIO, it raised the following issues, some of which were not addressed or reflected in the final decision:

> ***Overly Ambitious Plans for CIO.*** *In organizing the CIO, the* [2007-08] *budget proposal lists 15 major goals that will come from its formation—including improving IT procurements, enhancing training of state staff, and reorienting the state's Web pages. There is no prioritization reflected in the proposal. Particularly in CIO's early years, we are concerned that such an aggressive agenda will result in reduced effectiveness. In fact, the same problem plagued DOIT during its existence.*

Separating Approval From Funding Creates Risks. *The CIO would have no project funding authority, which would remain with DOF's budget staff. In theory, CIO would turn over an approved project to DOF to be fully funded. In practice, however, this could be a challenging process to manage and would require a high level of coordination and information sharing between DOF and CIO. The proposal provides no plan for coordinating project approval and funding.*

Departments could end up with a project approved by CIO's office and still be denied funding by DOF. *This is another problem that contributed to DOIT's failure. At the time, DOIT's responsibility was to approve project plans based on sound management practices and DOF's responsibility was to approve project budgets. Yet, DOF often approved projects at funding below the level recommended by DOIT. Eventually, DOIT's role became diminished because it did not have the financial clout to support its decisions.*

Oversight Must Be Independent. *As a control agency, DOF performs the role of dispassionate review of state programs and projects. This makes its IT oversight more effective by adding objectivity to the process. We are concerned, however, that CIO's advocacy for projects will limit its ability to provide an independent perspective on oversight.*

Security Proposal Would Add Unnecessary Layer*. Information security has not received priority within DOF. Security policies can increase costs, which runs counter to DOF's core mission of controlling costs. Moving the security program out of DOF, therefore, is a positive step. The administration's choice in moving IT security to SCSA appears to be an effort to follow industry practices to separate the CIO from security. To the extent that projects will receive security reviews by SCSA under the new structure, however, it would add another cumbersome layer of review in addition to CIO and DOF. It is also unclear how policies issued by CIO would be integrated with security policies issued by SCSA.*

Based on the concerns raised above, the LAO recommended the following alternatives which emphasized the OCIO's role as a strategic office, while maintaining specific project review and approval at the DOF:

Strategic Planning, Policies, and Standards. *The administration's proposal to place these responsibilities with CIO makes sense. The CIO would be the state's IT program expert and should be responsible for its planning and policy development.*

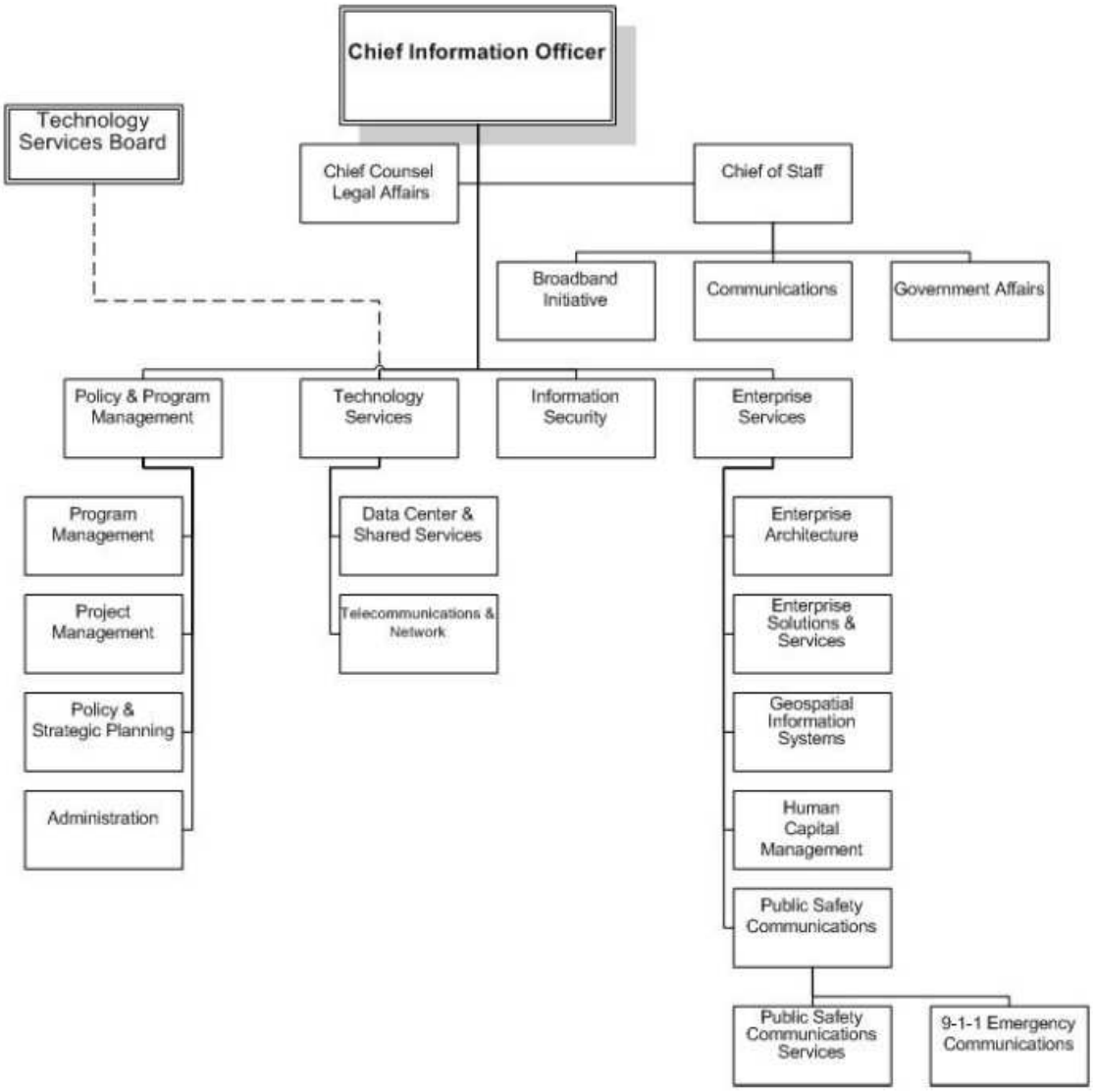
Project Review, Approval, and Oversight. *The current IT project funding and oversight structure has produced a reasonable approach to identifying and managing project risks and has provided balance between risk management and funding constraints. One key component is that DOF has the authority to approve, fund, and oversee a project. In addition, particularly in the short term, CIO will have other priorities upon which to focus. Adding the management of every state IT project to CIO's workload will stretch its capabilities, even with* [Office of Technology Review and Oversight] *OTROS staff relocated. We therefore recommend that OTROS's project review and oversight roles remain at*

DOF. The CIO would still be involved in the development of key IT projects. The CIO's involvement, however, would be from a strategic perspective rather than the "nuts and bolts" of detailed reviews.

Information Security. *Information security should receive more focus than it has received under the current structure. Creating a third IT review office (in addition to CIO and DOF), however, could unnecessarily hinder project reviews. We instead recommend that the security function be included within CIO's policies and standards role. As CIO issues statewide policies, it should include the perspective of how security is affected and data could be better protected. The three security positions currently at DOF should be transferred to CIO.*

Following enactment of SB 90, and the expansion of the OCIO, Governor Schwarzenegger appointed Teresa (Teri) M. Takai as California's CIO. As Michigan's state CIO and director of the Michigan Department of Information Technology, Ms. Takai oversaw an IT restructuring and consolidation of that state's IT apparatus into one centralized department servicing 19 agencies and over 1,700 employees. Among the initial challenges facing Ms. Takai in modernizing California's approach to IT, was to determine what exactly the state was currently doing. To this end, the OCIO conducted a statewide survey in May 2008 in order to establish a preliminary baseline. Additionally, the OCIO began releasing an annually update the strategic plan. For 2009, the OCIO issued a multi-part IT strategic plan in early 2009, including a broad strategic overview and a five-year IT capital plan, with a "tactical" plan to follow in May 2009.

Appendix C – Organization Chart: The Proposed Office of the State Chief Information Officer



Appendix D – Guideposts for the Way Forward: A Cliff's Notes to the 2003 RAND Report on IT Governance in California

Prior to the sunset of DOIT, RAND was asked to conduct a study of California's IT governance structures and strategies for the Bureau of State Audits. RAND's cross-case analyses and research literature review identified a number of common factors likely to account for successful IT programs under different governance models. Although the RAND report is now over five years old, the factors identified are sufficiently general that they are still useful guideposts in determining whether the Governor's proposal represents the best way to improve California's IT governance (see Figure 1 below).

Figure 1

Common Factors Associated with Successful IT Programs*

1. **Executive leaders who are champions of IT** and emphasize its value for achieving state missions.
2. **A management style** that is participative and collaborative, **that emphasizes "carrots" over "sticks,"** and that evidences a commitment to employees during periods of change.
3. **A modular and incremental approach** to development and implementation of IT initiatives.

[emphasis added]

*From *Effective Use of Information Technology: Lessons about State Governance Structures and Processes*—prepared by RAND for the California Bureau of State Audits (2003).

In addition to the common factors listed above, RAND also highlighted a number of key decision points that must be addressed by any IT governance structure. These bear keeping in mind and include the following:

- *Determine the appropriate degree of centralization and consolidation of IT services.*
- *Determine the appropriate degree of standardization that should take place in statewide IT applications.*
- *Establish the proper level of outsourcing for IT activities.*
- *Develop a strategy to mitigate the interruptions and distractions from statewide IT initiatives caused by the periodic turnover of state administrations.*
- *Develop a strategy to mitigate the delays and negative effects caused by the length of the budget cycle on the approval and implementation of IT projects.*
- *Determine the proper balance between the creation of IT specific plans with agencies' desires for integrated business plans.*
- *Develop a strategy to minimize the disruption that will be caused by the large number of IT employees with expertise concerning older IT systems and applications that are scheduled to retire in the near future.*

Finally, RAND found that "there are several models of IT governance exhibited by various states; no one is the 'right' one, but some are more relevant to California's

current context than others." Between the three models of IT governance encountered in the other states surveyed ("consolidated control," "collaborative leadership," and "advocacy"), RAND observed that all three "appear to be operating with considerable effectiveness [in other states]," even though they differed "in the degree of authority they gave to a state-level IT office in technical, financial, operational, and procurement areas." "It is possible," RAND noted, "to evolve from lesser to greater authority as a state-level IT office demonstrates competency and earns trust over time."

With specific respect to California, RAND recommended the following:

> *Regardless of governance model, the states we studied have an organizational statewide focus for IT developments. We conclude that* ***California would be best served by reestablishing a state IT agency*** *to act as that focal point. Because of the size and scope of California's IT developments and procurements, and a poor track record to date for "collaborative" effectiveness in a California IT agency, we believe the* ***"consolidated control" model*** *may be appropriate for a new attempt at an effective California IT governance agency—while providing substantial in-house technical expertise in that agency to guide statewide development and procurement initiatives* [emphasis added, in both cases].

Appendix E – Estimated Savings from GRP #1 (page 1 of 2)

General Fund Savings/Cost Avoidance
by Fiscal Year

(assumes General Fund expenditure account for 55% of IT expenditures)

Line Item	2009-10	2010-11	2011-12	2012-13	2013-14	Five-Year Total	Assumptions
Reduce spending on office automation tools (development, maintenance and support) by 50%.	$1.00	$8.94	$17.87	$17.87	$17.87	$63.55	1. All expenditures on office automation tools must be approved by OCIO.
Reduce data center/computer room sq. footage.	$0.00	$0.00	$9.00	$18.00	$27.00	$54.00	1. Agencies consolidate data centers by 25% per year. Expenditures above $250,000 require OCIO approval.
Reduce server spending through virtualization, reduce # of servers by 50%	$6.40	$17.16	$51.48	$51.48	$51.48	$178.00	1. All server expenditures must be approved by OCIO or AIOs for Agencies with consolidation plans approved by OCIO.
Reduce spending on storage by 50% through best practices.	8.25	16.5	33	49.5	49.5	156.75	1. All storage expenditures must be approved by OCIO or AIOs for Agencies with consolidation plans approved by OCIO.
General Fund Cost Avoidance	**$15.65**	**$42.60**	**$111.35**	**$136.85**	**$145.85**	**$452.30**	

Appendix E – Estimated Savings from GRP #1 (page 2 of 2)

Line Item	2009-10	2010-11	2011-12	2012-13	2013-14	Five-Year Total	Assumptions
Reduce outsourcing of IT Project Oversight by (50%).	$7.70	$7.70	$7.70	$7.70	$7.70	$38.50	1. Insource all IPOC work, absorb workloard w/ 20 new PY ($1M GF/OF). 2. Insource 40% of IV&V workload.
Reduce network costs for 2,500 circuits by $400 each.	0	3.3	4.95	6.6	6.6	21.45	1. Move to managed services, standard without exemption from OCIO.
Reduce non-project IT spending ($800 million) by 10 percent	$22	$44	$44	$44	$44	$198	1. All IT expenditures must be approved by Department CIOs. 2. Agency CIOs must approve all IT purchases in excess of $250,000. 3. OCIO must approve all IT purchases in excess of $500,000.
Strategic Sourcing/Contract Consolidation (10% savings on $225 million in spend)	0	12.375	12.375	12.375	12.375	49.5	1. Limit non-Project services spending to sourced contracts.
Reduce contingency set aside for IT projects (5%) - ~$1B AF	0	27.5	27.5	27.5	27.5	110	1. Reduce unanticipated tasks budgets by 50%.
General Fund Savings	**$29.70**	**$94.88**	**$96.53**	**$98.18**	**$98.18**	**$417.45**	
General Fund Savings/Avoidance ($ Millions)	**$45**	**$137**	**$208**	**$235**	**$244**	**$870**	
Other Fund Savings/Avoidance ($ Millions)	**$36.81**	**$112.09**	**$170.18**	**$192.27**	**$199.63**	**$710.98**	
Savings - All Funds/Avoidance ($ Millions)	**$82**	**$250**	**$378**	**$427**	**$444**	**$1,581**	

Appendix F – LAO Letter in Response to the Little Hoover Commission Request for Comments on GRP #1 (page 1 of 6)

March 9, 2009

Mr. Stuart Drown
Executive Director
Little Hoover Commission
925 L Street, Suite 805
Sacramento, California 95814

Dear Mr. Drown:

This letter is in response to your request for comments on the Governor's Reorganization Plan (GRP) to consolidate state information technology (IT) functions under an expanded Office of the State Chief Information Officer (OCIO).

Current IT Governance Structure

The GRP proposes consolidating multiple state IT functions under an expanded OCIO. Currently, IT governance responsibility is distributed across various entities and departments:

- The OCIO is responsible for many activities, including developing and enforcing the state's IT plans, policies, and standards; conducting IT project review, approval, and oversight; and promoting the efficient and effective use of IT in state operations. The Chief Information Officer (CIO) is a member of the Governor's Cabinet and advises the Governor on the strategic management of the state's IT resources.
- The Office of Information Security and Privacy Protection (OISPP), part of the State and Consumer Services Agency (SCSA), is made up of two offices. The Office of Information Security is responsible for ensuring the confidentiality, integrity, and availability of state systems and computer applications and for protecting state information. The Office of Privacy Protection promotes and protects privacy rights of consumers.
- The Department of Technology Services (DTS), also within SCSA, provides IT services to state, county, federal, and local entities throughout California on a fee-for-service basis. Technology services include application and equipment hosting, storage, computing, networking, and training.

Appendix F – LAO Letter in Response to the Little Hoover Commission Request for Comments on GRP #1 (page 2 of 6)

- The Technology Services Board (TSB) governs DTS, setting policy on services provided by the department and reviewing and approving DTS' annual budget and rates. The state CIO chairs the TSB.
- The Department of Finance (DOF) has responsibility to maintain all statewide IT procurement policy in the State Administrative Manual and Statewide Information Management Manual. The Department of General Services (DGS) has responsibility for the actual procurement of IT goods and services.
- The DGS also houses the Telecommunications Division, which provides engineering and technical support services for public safety-related communication systems.

Proposed IT Governance Structure

The GRP proposes consolidating the above state IT functions. The new organizational structure would transfer DOF's authority over procurement policy for IT goods and services to the OCIO. It would also transfer all the functions from DTS, the Telecommunications Division of DGS, and the information security functions of OISPP. The CIO would keep her current responsibilities. All transferred employees affected by this reorganization would report to the OCIO, though physically they would remain at their current locations. The total number of positions transferred would be about 1,180, with 800 from DTS, 368 from DGS's Telecommunications Division, and 6 from OISPP. All unexpended balances of appropriations and other funds available for functions affected by this reorganization would be transferred to the OCIO and would have to be used for their original purposes.

The administration indicates this GRP is a first step toward greater centralization of state IT functions. The administration believes this first phase of reorganization would permit the state to avoid $185 million in costs (all funds) in 2009-10 and $1.5 billion in costs (all funds) over five years. This would be achieved through such means as consolidating software contracts, data centers, computer rooms, servers, storage, and networks. However, we note that the administration has not yet made public the details regarding how such costs would be avoided.

The Benefits of Consolidating

In general, consolidating entities with similar functions under a centralized governance structure can lead to increased efficiencies and improved services as redundant staff activities are eliminated and the delivery of services is streamlined. We concur that there are potential benefits, in particular, from consolidating the state's IT functions. The state CIO possesses a broad perspective of the state's overall business and IT needs and could better assist state entities in the best use of technology to maximize the state's business processes and goals. This is referred to as an "enterprise" perspective. The CIO is responsible for considering IT and business needs across agencies, departments, and

Appendix F – LAO Letter in Response to the Little Hoover Commission Request for Comments on GRP #1 (page 3 of 6)

projects (rather than focusing narrowly on the needs of one or two entities) and establishing a statewide strategic plan for the effective use of IT across state government. Consolidating IT functions under the OCIO could result in greater alignment of IT services and resources and produce some IT-related efficiencies and improvements on a statewide level. Below, we discuss key features of the plan and the associated benefits.

Procurement Policies. Transferring the authority to create and enforce IT procurement policy to the OCIO could lead to more standardized procurement policies for all IT goods and services. Currently, procurements are conducted on a case-by-case basis according to the technology and business needs of the requesting agency, department, or project staff. This approach does not always allow the state to optimize service contracts, to buy in bulk, or to buy strategically. A CIO responsible for procurement policy would have the ability to establish standards for the types of technologies and IT infrastructure procured for the entire state. Standardization could result in savings as the state would be able to take advantage of economies of scale in purchasing IT goods and services.

Additionally, under the proposed consolidation, the OCIO could be in a stronger position to establish procurement policies that facilitate more efficient and coordinated IT-related procurements. For example, current state procurement policies do not systematically require the early or active involvement of state IT experts, such as DTS and IT security staff, DGS IT procurement staff, or outside IT consultants during the procurement process. (Some staff for particular departments and projects do take advantage of such resources, but not all do so now.) The OCIO could help to standardize expert involvement and other "best practices" in procurement that could mitigate future risks and reduce the cost to the state of such projects.

Security Functions. The departments that report to the SCSA are engaged in a wide array of activities such as civil rights enforcement, consumer protection, professional licensing, and procurement. With such a wide range of responsibilities, one of the SCSA's responsibilities—information security—is not necessarily the agency's highest priority. The administration's proposal would move the security functions that currently reside in SCSA to the OCIO, where they would likely receive greater attention. Under OCIO, security issues could gain greater visibility and more awareness as the CIO established statewide IT goals and policies, including standards for information security.

Data Center Shift. Moving DTS under OCIO makes practical sense. This move would allow the OCIO to create and enforce more standardized processes and technologies for all clients who utilized DTS services. Currently, as is the case with IT procurements, DTS provides services to its clients based upon their individual needs. While this allows DTS to address and satisfy individual clients, DTS admits there is a lack of standardization in the use of hardware and other technologies. If DTS were a part of OCIO, more strategic and standardized approaches to providing data center

Appendix F – LAO Letter in Response to the Little Hoover Commission Request for Comments on GRP #1 (page 4 of 6)

services could be developed that take into consideration what is most appropriate for overall state IT needs rather than a single client's IT needs. The OCIO could give DTS the leverage it needs to only offer data services that are aligned with the state's strategic plan for IT. Greater alignment of data services could increase efficiencies and lead to reduced pricing for DTS services.

Possible Concerns With Consolidating

While standardization of IT policies and processes could result in some cost efficiencies, this is not without potential tradeoffs. These include limiting state entities' choice in purchasing IT goods and data services, potentially reducing the number of IT vendors who may sell to the state, and creating a large bureaucracy that may impede rather than encourage government efficiency.

Limiting Choice. Currently, state agencies and departments can purchase IT goods and services through DGS or through outside vendors. Similarly, they may use DTS for data services or find a vendor to provide these services. Under the new reorganization, the CIO would standardize the types and kinds of software, hardware, and technologies the state is able to obtain as well as the data services the state provides. Though exceptions may be granted, in general, all state entities would have to adhere to these new policies and standards in purchasing IT goods and services, thus limiting their choices.

Reduction in Vendors. The OCIO's choice of certain systems and technologies over others could limit the pool of contractors that are able to do business with the state. Reducing the number of vendors could decrease competition for certain contracts, potentially driving up costs for IT goods and services.

Building a Bureaucracy. Should the GRP be implemented, the OCIO would grow to an office of over 1,200 staff. A large office has the potential to become significantly more bureaucratic, creating policies and procedures with unintended adverse consequences. Moreover, a larger bureaucracy may not be as flexible in addressing changing situations.

Despite these potential drawbacks, we believe ensuring more standardized IT policies and procurements outweighs these concerns. However, there are some implementation issues associated with this GRP that should be considered.

Issues for Consideration

This GRP lacks key details regarding its implementation as well as how it would achieve the stated level of cost avoidance. Additionally, the GRP proposes to increase OCIO's workload without prioritizing its new and existing functions. We discuss these concerns below.

Details Lacking and No Sense of Prioritization. The GRP lacks key details regarding how this reorganization would actually be implemented. For example, the GRP does

Appendix F – LAO Letter in Response to the Little Hoover Commission Request for Comments on GRP #1 (page 5 of 6)

not address how the OCIO would maintain effective oversight over multiple new functions and staff. Additionally, there is no indication how the new responsibilities and roles for the OCIO proposed in the GRP would be prioritized along with its existing ones. The OCIO would be responsible for, among many things, strategic planning, project review and oversight, managing a large data center, and creating statewide IT-related policies and standards. We are concerned that the office may be taking on too many duties at one time.

One approach the administration could take to mitigate these potential risks would be to reduce the number of functions transferred to the OCIO at one time. A more phased approach could reduce the total workload for OCIO's current managers, allowing them to better handle problems as they arise. For example, the reorganization could begin with the transfer of procurement and information security policy to the OCIO. Another example would be giving the OCIO the authority to begin building state expertise in project management, an IT function not included in the GRP but one we discuss at length below. Also, a more phased approach could be less disruptive to department staff, allowing them to be more systematically and slowly consolidated into OCIO.

Project Management Goals Absent. We note that an important IT-related function has been omitted from the reorganization plan. The OCIO has highlighted the need for the state to develop a workforce of state workers with IT project management expertise who could better guide the implementation of IT projects. Toward that end, the OCIO has developed a project management academy and plans to establish a Project Management Office within OCIO. The GRP does not advance this important goal.

Our analysis indicates that there is an opportunity to do so. The Office of Systems Integration (OSI) within the Health and Human Services Agency (HHSA) has successfully managed that agency's IT projects. The OCIO could leverage the experience and expertise of OSI's project management staff by absorbing them, as they rotate off completed projects, into the newly established Project Management Office. This would give OCIO a small cadre of professional state staff that could be "loaned" to different state IT projects. Presumably, many former OSI staff would end up working on OSI-led projects, as they comprise a large proportion of the state's overall IT project portfolio. Creating a cadre of state workers to conduct project management would have statewide benefits by addressing the state's lack of this particular expertise.

Cost Avoidance Unknown. As noted earlier, the administration estimates cost avoidance of approximately $185 million for 2009-10 and $1.5 billion for the first five years if this GRP is implemented. We agree there will be some cost avoidance, in the short term, once IT functions and resources are streamlined and statewide IT policies are standardized. Without further details on the administration's estimates of cost avoidance, however, we cannot comment on their accuracy. In general, we are skeptical about the administration's claim of $1.5 billion in cost avoidance associated with implementing this GRP alone.

Appendix F – LAO Letter in Response to the Little Hoover Commission Request for Comments on GRP #1 (page 6 of 6)

The Bottom Line

In conclusion, the administration's plan to consolidate more IT functions under the OCIO has merit and offers potential statewide cost avoidance—more so in the long term, when IT policies have been firmly established and state entities are working from a more standardized IT framework. However, we are concerned that this GRP lacks detail regarding implementation and has not completely addressed potential challenges to the existing OCIO staff and newly transferred offices. The Legislature may want to consider other means of achieving some of the same goals stated in this GRP.

Please contact Erika Li at (916) 319-8306 if you have any questions about our comments.

Sincerely,

Mac Taylor
Legislative Analyst

Appendix G – Example of IT Performance Metrics (page 1 of 2)

Office of the State Chief Information Officer
Balanced Scorecard

Strategic Metrics

Objectives	Measures
Enterprise Mission Goals	Percent mission improvements (cost, time, quality) attributable to IT solutions and services. Percent planned IT benefits projected v. realized.
Portfolio analysis & management	Percent IT portfolio reviewed and disposed. Percent old applications retired. Percent applications retirement plan achieved. Percent reusable of core application modules. Percent new IT investment v. total spending.
Financial & investment performance	Percent and cost of services provided in-house v. industry standard. IT budget as a percent of operational budget and compared to industry average. Net present value, internal rate of return, return on investment, return on net assets.
IT resource usage	Percent consolidated/shared resources across enterprise. Percent cross-unit shared databases and applications. Percent hardware/software interoperability.

Service Measures

Objectives	Measures
Customer partnership & involvement	Percent projects using integrated project teams. Percent joint IT customer/supplier service-level agreements.
Customer satisfaction	Percent customers satisfied with IT product delivery. Percent customers satisfied with IT problem resolution. Percent customers satisfied with IT maintenance and support. Percent customers satisfied with IT training. Percent products launched on time. Percent service-level agreements met.
Business process support	Percent IT solutions supporting process improvement projects. Percent users covered by training to use new IT solutions. Percent new users able to use applications unaided after initial training.

Appendix G – Example of IT Performance Metrics (page 2 of 2)

Office of the State Chief Information Officer
Balanced Scorecard

Internal Business Measures

Objectives	Measures
App development & maintenance	Percent decrease in application software failures, problems. Mean time to resolve critical defects. Cycle time for development.
Project performance	Percent projects on time, on budget. Percent projects meeting functionality requirements. Percent projects using standard methodology for systems analysis and design.
Infrastructure availability	Percent system availability. Percent communications availability. Percent applications availability. On-line system availability.
Enterprise architecture compliance	Number of variations from standards detected by review and audit. Number of exceptions from standards granted. Number of exceptions from standards requested. Percent increase in systems using architecture. Percent staff trained in relevant standards

Innovation and Learning Measures

Objectives	Measures
Workforce competency/development	Percent staff trained in use of new technologies and techniques. Percent staff professionally certified. Percent IT management staff trained in management skills. Percent IT budget devoted to training and staff development.
Advanced technology use	Percent employees skilled in advanced technology applications. Number of dollars available to support advanced technology skill development.
Methodology currency	Currency of application development methods used. Percent employees skilled in advanced application development methods. Percent projects developed using recognized methods and tools.
Employee satisfaction/retention	Percent employee satisfaction with the capability of the existing technical and operating environment to support mission. Percent employee turnover by function.

Appendix H – Full Text of Governor's Reorganization Plan #1 (2009)

Organizing for Success

IT Governance for California State Government

GOVERNOR'S REORGANIZATION PLAN #1
FEBRUARY 2009

This Page Intentionally Left Blank

I. Introduction

The application of information technology permeates all aspects of California state government. From the collection of income and sales taxes, to providing health and social service benefits, to licensing vehicles and professionals, the use of technology within state government is multifaceted, supporting a multitude of programmatic missions, and evolving in response to changing policy and programmatic goals. Technology is no longer bolted onto the side of government programs; now, it is an integrated part of program design. The very ability of state agencies to manage their resources and efficiently deliver services to Californians is inextricably linked to their ability to effectively use technology. On the strategic level, as policy and programmatic initiatives move to "cross-boundary" models – cutting across traditional agency, organizational and jurisdictional boundaries – state executives will need to leverage technology to partner more closely with individuals and groups within and outside of government and must be able to seamlessly collaborate across the enterprise.

Impeding this growing dependency is the fact that the state's technology programs are distributed across dozens of agencies, without a broad and cohesive organizing logic that informs the activities of information technology leaders as they build or acquire new systems or infrastructure. As a result, even the many positive advances in the state's use of technology over the last decade, has failed to take advantage of these advances on an enterprise-wide basis. Further, the skillful use of information technology is particularly important now that residents and businesses expect to conduct their business with state government on the Internet, and also expect transparency and accountability from their government.

Information Technology Governance

Trends in the public sector, especially in those states that have been recognized by the Pew Center on the States for information performance, provide context as to the form, organization and benefits of effective information technology governance. In terms of information performance, among the states (Michigan, Missouri, Utah, Virginia and Washington)[i] earning the Pew's Government Performance Project grade of "A" all have integrated policy and operational functions within information technology organizations that have an enterprise, or statewide, perspective. Beyond Pew's assessment, the Little Hoover Commission, the Center for Digital Government, Deloitte Consulting, Gartner, the Legislative Analyst's Office, and the RAND Corporation have observed that the state must transform the underlying way technology is governed and managed within state government if it is to be effectively leveraged as a strategic asset to improve public outcomes and maximize efficiency.

Californians rightly expect affordable, accessible and responsive services from their state government and only the strategic use of information technology can enable California state government to meet these expectations. Doing so

requires a framework to leverage existing technology assets and a statewide approach to the planning, design and implementation of future information technology systems and infrastructure. In the context of the state's fiscal challenges, information technology also provides policymakers with a way to continue to provide needed services to the public by enhancing the performance and productivity of state government.

Establishment of the Office of the State Chief Information Officer

Since the early 1980s, the state tried several models for governing the way it manages information technology investments and operations. Nearly all of these models were shown to be insufficient for the management and oversight of complex technology infrastructures and large IT projects. Accordingly, in 2006, the Legislature enacted and Governor Arnold Schwarzenegger signed SB 834 (Chapter 533, Statutes of 2006) to establish the Office of the State Chief Information Officer (OCIO).

SB 834 made the State CIO a member of the Governor's cabinet, with the position appointed by the Governor and subject to Senate confirmation. The bill also codified the responsibilities of the State CIO, making the State CIO the nominal leader for the Executive Branch's IT program. The Budget Act of 2007 and related legislation (SB 90, Chapter 183, Statutes of 2007) substantially expanded on SB 834 and provided positions and an appropriation to establish the OCIO. Government Code § 11545 et seq. provide the State CIO and the OCIO with responsibility and authority for statewide technology vision, strategic planning and coordination, technology policy and standards (enterprise architecture), data management policy and standards, and the review and approval of technology projects.

Defining Federated IT Governance

Federated IT governance establishes the relationship among the Agencies, departments and the state CIO. The federated governance model maintains the authority of agencies to manage program-specific IT processes and systems. IT functions that are common across the entire state are managed at the enterprise level for all agencies by the central IT organization. The federated governance model confirms that programmatic needs are the primary drivers for IT decisions and acknowledges the importance of IT as an enabler of agency success.

With the creation of the OCIO, the Governor and the Legislature have established the structure on which a strong information technology program can be built. Greater expectations and new challenges require a new, more coordinated approach to the governance and management of information technology. This Reorganization Plan provides that approach - a federated governance model for information technology in California.

II. The Current State of IT Governance in California

In its current state, IT governance responsibilities are dispersed across multiple entities and organizations.

Existing Organizations

Office of the State Chief Information Officer (OCIO) – The OCIO was formally established by Senate Bill 90 and began formal operation in January 2008. The State CIO's specific responsibilities include the following:

- Advising the Governor on the strategic management and direction of the state's information technology resources.
- Establishing and enforcing state information technology strategic plans, policies, standards and enterprise architecture.
- Minimizing overlap, redundancy and cost in state operations.
- Coordinating activities of agency information officers and the Director of Technology Services.
- Improving organizational maturity and capacity in the effective management of information technology.
- Establishing performance management practices and ensuring state information technology services are efficient and effective.
- Approving, suspending, terminating and reinstating information technology projects.

In the Budget Act of 2008, the Legislature provided the OCIO with 32 positions and a budget of approximately $6.7 million. The Governor's 2009-10 January Budget proposal includes 29 new positions and an increase of $8.4 million ($5.7 million General Fund) to develop a strategic plan and overall structural design for education data systems and to provide sufficient resources to carry out the existing duties of the Chief Information Officer related to Enterprise Architecture, Geospatial Information Systems (GIS), human capital management, program and project management and information technology policy.

Table 1, see below, describes key actions the OCIO has taken to date consistent with SB 90.

Table 1: Key Actions by the Office of the State Chief Information Officer

Statutory Role of the CIO	Key Actions to Date
Advise the Governor on the strategic management and direction of the state's IT resources.	✓School Finder/Education Data Project ✓Broadband and digital literacy ✓GIS Task Force
Establish and enforce state IT strategic plans, policies, standards, and enterprise architecture.	✓ The IT Capital Planning process implemented by OCIO ensures all IT investments are consistent with state policy priorities, IT policy and standards, while reducing duplication and overlap.
Minimize overlap, redundancy and cost in state operations.	✓ Moving forward with server consolidation plan that will significantly reduce costs when fully implemented. ✓ Leading effort to consolidate state e-mail systems to enhance security, reduce costs, and improve reliability.
Coordinate activities of AIO's and the Director of DTS.	✓ With DTS Director, implemented spend control program at DTS achieving savings on new hardware and significant cost avoidance related to capital expenditures. ✓ Significantly enhanced the state's web presence through coordination with AIOs, recognized by Brookings institute and the Center for Digital Government.
Improve organizational maturity and capacity in the effective management of IT.	✓ Establishing a Project/Risk management methodology including a new training program as a requirement for state IT Project Managers. ✓ Developing statewide workforce development and planning strategy focused on training, recruiting, and retaining IT staff
Establishing performance management and ensuring IT services are efficient and effective.	✓ In establishing the Project Management Methodology, developed key metrics to assess performance of IT projects.

Other information technology organizations/functions with a statewide operations or policy function include:

The Department of Technology Services (DTS) – The DTS was established on July 9, 2005, via a Governor's Reorganization Plan, and exists under the jurisdiction of the State and Consumer Services Agency. The DTS provides information technology (IT) services, on a "fee for service" basis, to state, county, federal and local government entities throughout California. Through the use of a scalable, reliable and secure statewide network, combined with expertise in voice and data technologies, DTS delivers comprehensive computing, networking, electronic messaging and training. The DTS is made up of seven divisions,

including: Data Center Operations, Security Management, Engineering, Customer Delivery, Policy and Planning, Statewide Telecommunications and Network, and Administration. [Describe Technology Services Board] In the Budget Act of 2008, the Legislature provided DTS with authority for 801.8 positions and $278 million in expenditure authority from the Technology Services Revolving Fund.

The Technology Services Board (TSB) – The TSB, which was established on July 9, 2005, via a Governor's Reorganization Plan, provides governance and guidance to the DTS, and ensures appropriate oversight and customer orientation. The TSB was designed to ensure that the DTS is governed by its major customers from a business perspective. Chaired by the State CIO, the TSB membership consists of top executives from all Cabinet agencies and the State Controller's Office.

Office of Information Security and Privacy Protection (OISPP) – The OISPP was established effective January 1, 2008, and is part of the State and Consumer Services Agency. The OISPP is responsible for leading state agencies in securing and protecting the State's information assets by identifying critical technology assets and addressing vulnerabilities; deterring identify theft and security incidents; sharing information and technology lessons promptly; enhancing government response and recovery; and developing consumer education programs. In the Budget Act of 2008, the Legislature provided OISPP with authority for 14 positions and a budget of $1.9 million.

Department of General Services, Telecommunications Division (DGS-TD) – The DGS-TD was first established in 1947 and has existed in its current incarnation since the business telecommunications functions were transferred to the Department of Technology Services on July 9, 2005. The DGS-TD, as part of the DGS, exists under the jurisdiction of the State and Consumer Services Agency. The DGS-TD is made up of two distinct offices, the Office of Public Safety Communications Services (OPSCS) and the State of California 9-1-1 Emergency Communications Office. The OPSCS provides engineering and technical support services for public safety related communications systems, including: design, installation, and maintenance services. The 9-1-1 Emergency Communications Office provides oversight of the 9-1-1 network and approximately 500 police, fire, and paramedic dispatch centers, also known as Public Safety Answering Points (PSAPs) and assists PSAPs in the administration and funding of 9-1-1 services. In the Budget Act of 2008, the Legislature provided DGS-TD with authority for 368 positions and $223 million ($152 million for local assistance, $71 million for state operations) in expenditure authority.

IT Procurement Policy – In enacting Public Contract Code Sections (PCC) §12100-12113, the Legislature drew a distinction between the role of IT procurement policy and IT procurement procedure by granting the Department of Information Technology (DOIT) authority for IT procurement policy and the

Department of General Services with authority over IT procurement procedure. When the Department sunset on July 1, 2002, this authority was transferred to the Department of Finance (DOF) and Management Memo 02-20 clarified the delineation of responsibilities in the area of IT procurement. Several references in PCC §12100-12113 still reference that the DOIT and the DGS are jointly responsible to create and coordinate policies and procedures for the acquisition of information technology goods and services. Clearly defining the roles and responsibilities for IT procurement policy and procedure is necessary to implement common technology standards statewide.

Information Technology in California State Government

In May 2008, the OCIO conducted a statewide survey in an effort to understand and baseline key data to gain a clearer picture about the state of information technology in California state government.[ii] The survey requested information about several areas, including: general information about agencies IT organizations and how services are delivered; infrastructure (including mainframe, servers, and storage); e-mail services; and technical environment. The OCIO aggregated the data from the survey and validated it against other reliable sources of information.

Key Findings from the Survey

- Top Line Information:
  - Operating expenditures of more than $3 billion annually.
  - 130 individuals serving as CIOs or in an equivalent function within state agencies.
  - More than 10,000 authorized positions in IT classifications (annual payroll/overhead in excess of $1.5 billion).

- IT Projects
  - More than 120 large IT projects under development with estimated budgets exceeding $6.8 billion over 11 years.
  - More than 500 small to medium IT projects under development.

- IT Human Capital
  - More than 50% of the state's IT workforce will be eligible to retire within the next five years.
  - Existing IT leadership capabilities require further development.
  - Deferred spending on workforce development has resulted in skill gaps and shortages in key areas (e.g. project management and business analytics).

- IT Infrastructure - Data Centers, Servers and Storage
  - The state has approximately 409,000 sq. ft of floor space in 405 locations dedicated to data centers and server rooms.
  - Approximately 33 percent of data center floor space lacks sufficient disaster recovery and backup capabilities.

- The state owns and operates more than 9,494 servers. More than a third of these servers are at, or near, end of life (3+ years old).
- Agencies are operating 259 storage systems (159 Storage Attached Network (SAN) systems and 100 Network Attached Storage (NAS) systems.

- IT Infrastructure – Desktop
  - More than 200,000 desktops/laptops in use by Executive Branch agencies, with a refresh cycle ranging between three to five years.
  - The average desktop in use requires 4 to 16 times more energy than a laptop computer operating with advanced power management.
  - More than 100 different email systems.
    - 180,000 active email boxes.
    - 75 terabytes of storage (75,000 gigabytes).
    - 15 million emails per day.

- IT Security
  - Explosion in e-mail spam – ~95% of the e-mail the state receives each day is spam.
  - The state's network vulnerability is projected to increase by more than 800 percent by 2018 if we maintain the current operating model.

From the information gathered from the survey, the OCIO reached the following conclusions:

- The State maintains a significant number of IT facilities, equipment, and staff across individual organizations. This provides an opportunity for consolidation, particularly with email services.
- The State could improve governance, stake holder buy in, and communication of IT investments by standardizing reporting relationships as well as roles and responsibilities within state agencies for setting IT priorities.
- The State could improve the management of IT resources by increasing the centralization of services.
- State data centers are a prime target for efforts to improve energy efficiency.
- Web and e-mail security threats are increasingly sophisticated.

III. The Case for Reorganization

Modern technology governance is no longer just about technology; it is about leadership in effectively and efficiently managing an organization's use of technology to meet its business needs. It includes the structures and processes for setting direction, establishing standards and principles, and prioritizing IT investments that improve business value. IT governance is the mechanism for deciding who makes what decisions about technology use and it creates an accountability framework that drives the desired use of technology. Effective information technology governance also includes the processes by which key decisions are made about IT investments. Similarly, IT project success depends on effective, ongoing communication across all levels of an organization.

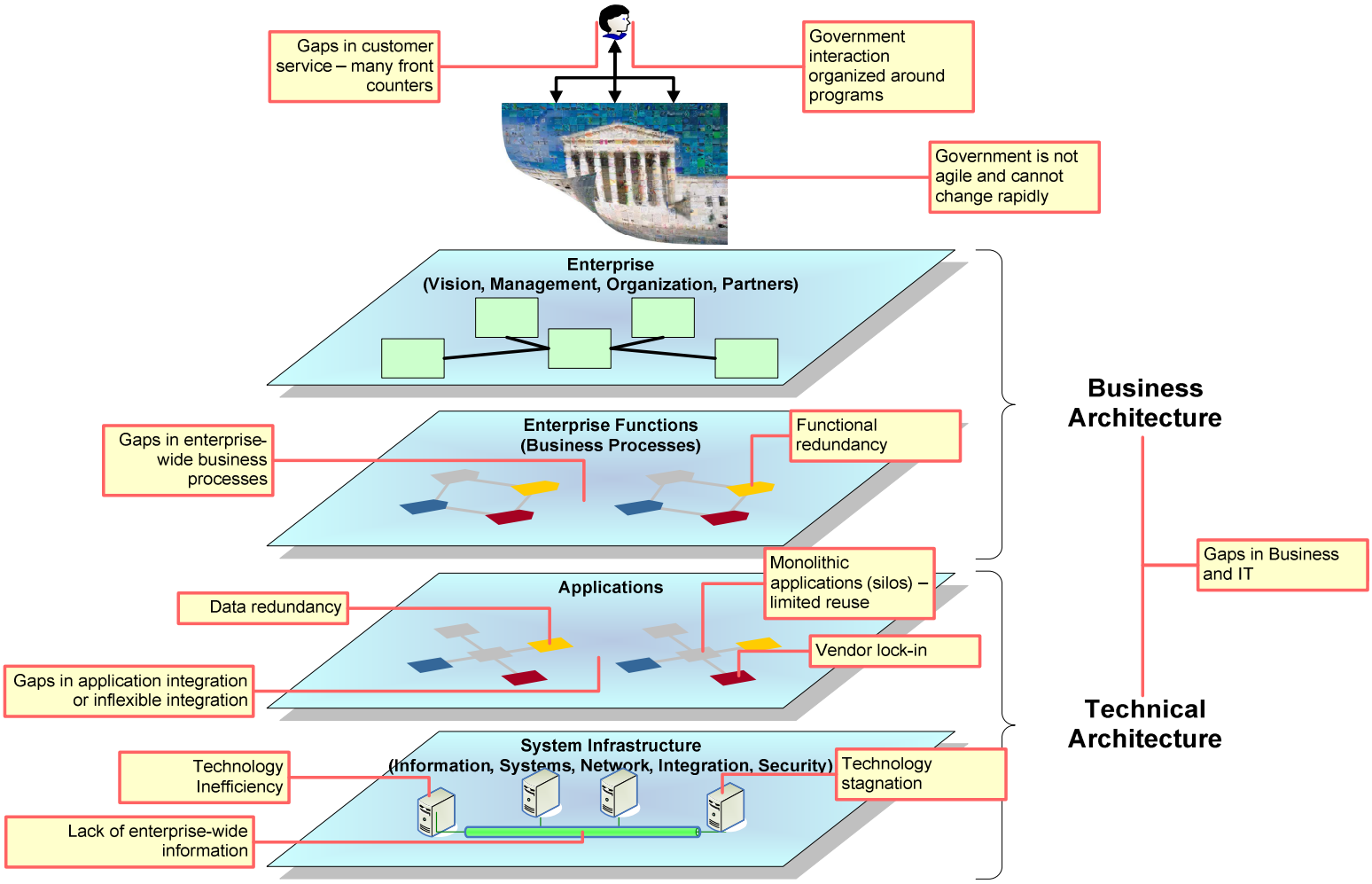
The central question, which this plan addresses, is *why* reorganize and *why* reorganize now? California must reorganize its information technology governance structure to:

- Establish a common sense governance model that aligns with best practices.
- Increase coordination and operational efficiency, reduce costs and improve energy efficiency through statewide IT shared services, common IT standards, and consolidated IT infrastructure.
- Meet growing public expectations for services accessible anytime and anywhere over the Internet.

The Challenges and Opportunities of the Status Quo

While significant progress has been made toward enhancing information technology governance and management in California state government over the last several years, significant challenges and opportunities remain. These challenges and opportunities occur at every level of the state's business and technical architecture (see Figure 1 below) and result in sub-optimized efforts that dissipate resources and produce inconsistent results. They expose the state to higher overall operational costs from program overlaps, redundancies, inefficient use of resources and increased vulnerabilities to security threats and architecture breakdowns.

Figure 1: The Challenges and Opportunities of Status Quo IT Governance



As the Little Hoover Commission recently observed, the dispersion of information technology assets, including human and economic capital and technology infrastructure, across agencies is the greatest challenge to accountable and effective information technology governance in California state government.[iii] This condition reinforces organizational silos, adversely impacting technology operations as well as programmatic efficiency and fiscal performance.

Computing Infrastructure Challenges

To support the automation of business processes, agencies rely on a wide assortment of systems and storage devices that include: file and print servers, application and database servers; Internet and Intranet servers; and Network Attached Storage and Storage Attached Network Systems. The management of these systems is intended to ensure that data is physically stored, retrieved, archived and deleted as needed to support business functions. Outside of the state's data center environments, the management of systems and storage

technologies is distributed across all agencies and results in diverse technical environments. The proliferation of distributed systems and storage devices has brought with it the necessity to manage increasingly complex environments. The total cost of ownership is inevitably higher in a complex environment. Research by Gartner shows that 40 percent of all application unavailability experienced by end users is caused by human error; these errors are more likely to occur in complex technical environments. Additional challenges due to highly differentiated technical environments include:

- Difficulty in coordination resulting in technology inefficiency as well as functional and data redundancy.
- Challenges to integrating IT systems, which impedes information sharing across the enterprise.
- Duplication of effort, which limits the state's ability to leverage its scale to reduce the cost of operations.
- Dilution of the state's ability to reliably operate its technology infrastructure, exposing the state to increasingly sophisticated security threats.
- Underutilization of servers and data storage equipment resulting in increased technology operating costs, the inefficient use of energy and ultimately diverting resources from accomplishing programmatic missions.

Computing Infrastructure Opportunities

Centralized management and the careful consolidation of systems and storage devices offer the state numerous benefits that include: reduced complexity and support costs, lower error rates, better support for new business applications, as well as improved security, business continuity protection, and scalability and performance.

- Case Example – The state currently owns and operates more than 9,494 servers. If growth in the number of servers continues at the current pace, it is estimated that the state will own and operate more than 18,000 servers by 2014. Informed by industry best practices around server consolidation and virtualization, the OCIO estimates that the state could reduce the total number of servers it owns and operates by 50 percent without impacting system performance or service levels. This common sense approach to technology management would result in significant cost savings, cost avoidance and reduced energy usage over time.

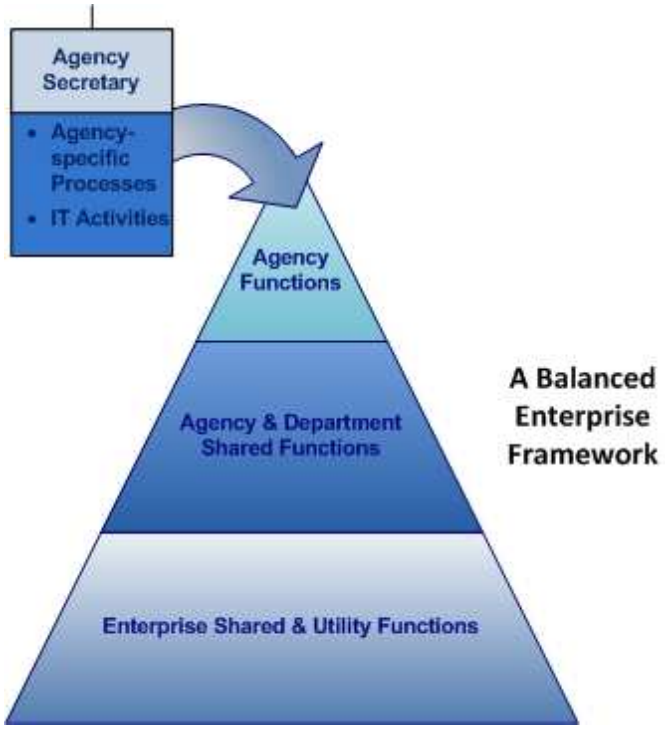
IV. Governance Aligned

The building blocks for a strong IT program are in place. By creating the Office of the State CIO at the Cabinet level, appointing an accomplished CIO and supporting the effective use of information technology throughout his Administration, the Governor in partnership with the legislature have established the necessary conditions for success. Success, however, requires more than building blocks. Providing the appropriate governance structure is essential. The governance process must facilitate good decision-making and ensure that services are delivered cost-effectively. In arguing for an invigorated IT governance structure, the Little Hoover Commission said:

> "The state CIO must be given the authority to set and execute technology priorities as laid out in the state's (2008) IT Strategic Plan. The state CIO must be given the resources to accomplish the task."[iv]

Also, the governance model should make possible transformation of service delivery across state government. Figure 2, below, depicts how California would transform the provision of IT services in support of agency programmatic missions.

Figure 2 – IT Services in Support of Agency Missions



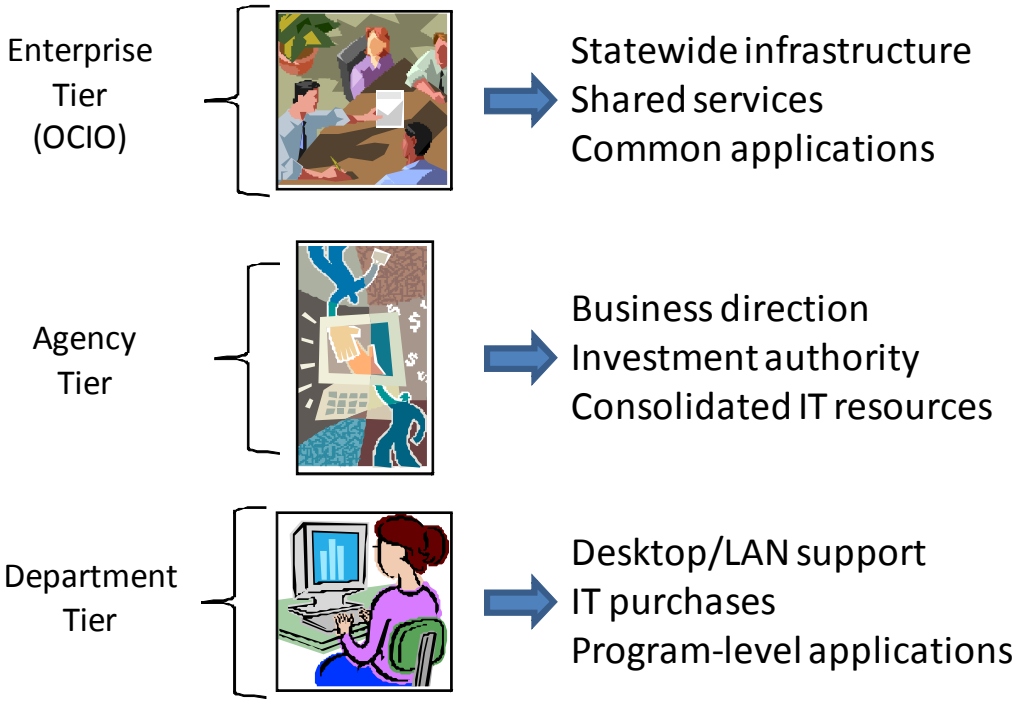
The governance model should align with the organization and decision-making structure of the Executive Branch, with Agencies establishing the policies and business priorities in program areas and Departments, within Agencies, execute policy direction and deliver government programs. Statewide control agencies, including the Department of Finance and the Department of General Services, manage and oversee the budget, support services and procurement. The Governor appoints Agency Secretaries, which (along with other appointees) comprise his Cabinet.

In addition to aligning with the decision authorities of the California Executive Branch, an effective IT governance process should also:

- Maintain decision authority at the appropriate tier;
- Provide statewide IT infrastructures and services;
- Consolidate IT resources to increase capacity and reduce costs;
- Improve management of IT projects;
- Streamline approval, purchase and oversight processes; and
- Foster collaboration and data sharing.

The federated governance model articulated in this Reorganization Plan (see Figure 3 below) satisfies the goals listed above while maintaining accountability at the responsible tier.

Figure 3 – Accountabilities in the Federated Governance Model



In the federated governance model, depicted in Figure 3 above, responsibilities will be divided as follows:

- The Enterprise Tier will provide robust IT infrastructure for the entire government, offer shared technology services across government, provide oversight to reduce risk in IT project management, and enhance security and stakeholder privacy.

- The Agency Tier will provide program policy and direction, prioritize Agency IT investments, and consolidate IT resources reduce operational costs.

- The Department Tier will provide local desktop/LAN support, manage business specific applications and purchase IT resources necessary for department activities.

Ultimately, this Reorganization Plan proposes to transform the existing IT governance framework from one that is focused on the needs of individual agencies to one that provides affordable, consistent and reliable technology services to all state agencies, while supporting the diverse needs of individual agencies. The plan introduces the concept of California's state government as a single enterprise in its use of information technology.

This governance framework consolidates enterprise information technology functions under the Office of the State Chief Information Officer to improve coordination and realize significant efficiencies in procurement and technology implementation.

This approach flows from business strategies and drivers and uses enterprise architecture to ensure the wise investment of limited resources. The federated governance framework enables operational improvements by defining common or shared technology (enterprise architecture) standards across diverse program areas, providing interoperability and supporting the diverse programmatic missions of state agencies. This approach also establishes a common platform and standards for operations and growth, improves the speed of implementations and provides an optimal return on investment.

V. The New Organization

The federated governance framework ensures the integrated and strategic use of technology resources statewide by bringing together the state's key IT policy and operating functions and organizations, defining the role of the State CIO and the OCIO as well as providing the organizational framework for Agency and Department technology leadership.

When it takes effect, this Reorganization Plan would establish an expanded Office of the State Chief Information Officer made up of the following existing organizations:

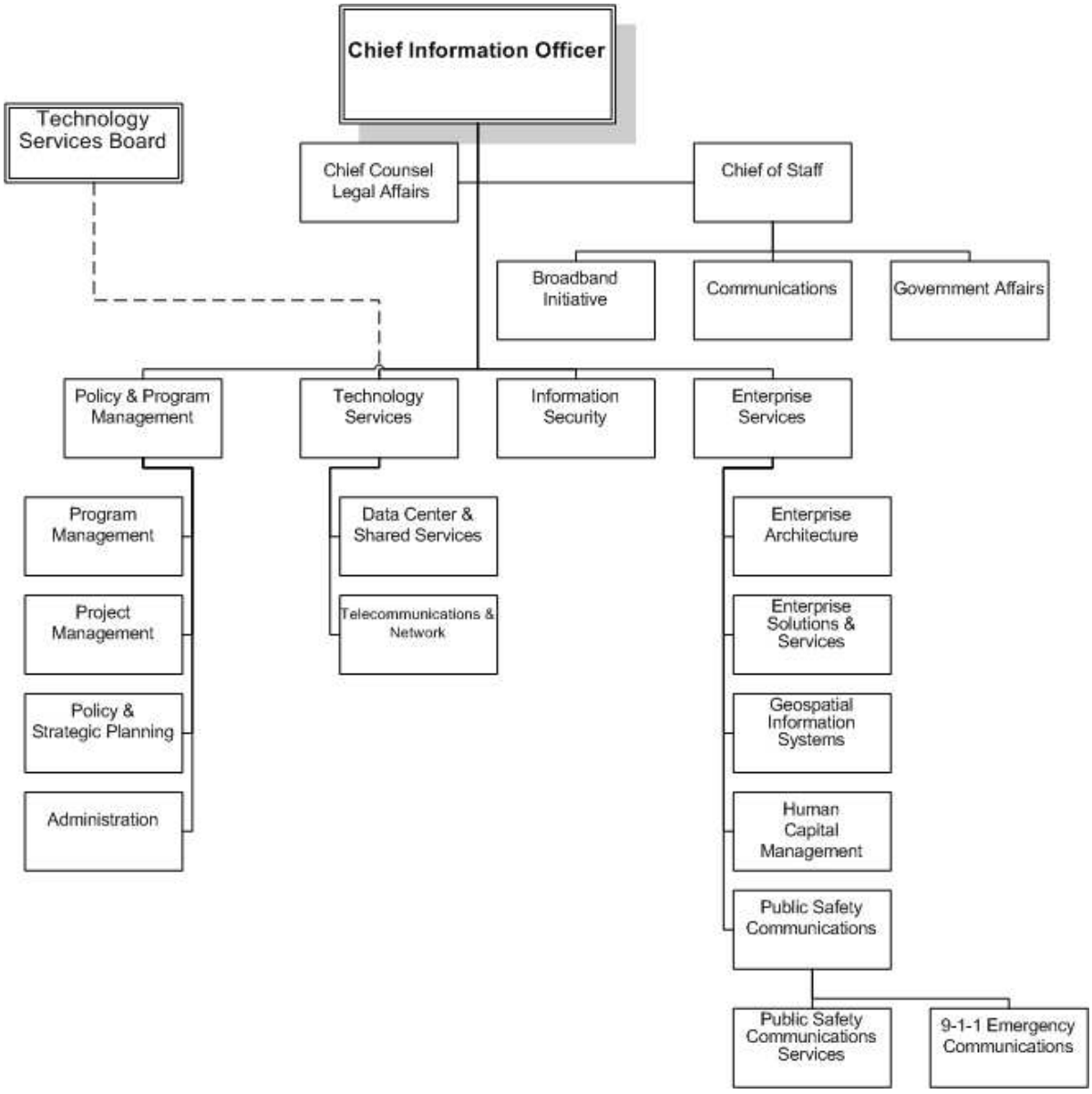
- The Office of the Chief Information Officer;
- The Office of Information Security and Privacy Protection (information security functions);
- The Department of Technology Services (including the Technology Services Board); and
- The Department of General Services – Telecommunications Division.

In addition to its existing functions, the expanded OCIO would gain responsibility for key functions, including:

- Enterprise Information Technology Management;
- Enterprise Information Security;
- Data Center and Shared Services;
- Unified Communications Services (voice/video/data networks and radio systems);
- IT Human Capital Management;
- Information Technology Procurement Policy; and
- Broadband and Advanced Communications Services Policy.

The organization that would result from this Reorganization Plan (see Figure 4 below) aligns with best practices in the public sector and directly supports the state's policy goals and programmatic initiatives.

Figure 4 – Proposed Office of the State Chief Information Officer



Executive Office of the CIO
The CIO will continue to report directly to the Governor and serve as the primary point of accountability for the management of the state's integrated information technology and security program. The Executive Office will consolidate functions that cut across program areas to create a unified, enterprise-wide approach to IT and information security policy and operations. The CIO will continue to fulfill all current Agency Secretary roles. In addition, the CIO will advise and assist in the implementation of major policy and program matters and be the principal communication link between the Governor and the constituent units of the Office. The CIO remains a cabinet-level position, appointed by the Governor and confirmed by the Senate.

Crosscutting and coordinating responsibilities that will be consolidated in the Executive Office, include the following:

- California Broadband Initiative Office –The Office will provide leadership on policy initiatives related to broadband and advanced communications services, including coordinating the implementation of the California Broadband Task Force Report (except those recommendations related to right-of-way).
- Office of Government Affairs – The Office will serve as the OCIO's liaison to the Legislature, analyze federal and state legislation related to information technology and security issues, coordinate the development of legislation and monitor legislatively mandated reports.
- Office of Communications – The Office will act as the OCIO's liaison to employees, the news media, community groups and other external organizations.
- Office of Legal Affairs – The Office will coordinate the OCIO's legal activities and provide the CIO with legal counsel.

<u>Transferred Functions:</u>
The CIO will fulfill all current responsibilities of the State CIO as well as the functions of the director of the DTS, the director of OISPP for information security and the Director of General Services' responsibilities related to telecommunications. The State CIO will now provide IT direction to Agency and Department Chief Information Officers. In addition, the State CIO will assume authority for IT procurement policy and performing enterprise technology functions.

Divisional Structure and Responsibilities
The OCIO will be comprised of the Technology Services Board and four offices – the Policy and Program Management Office, the Office of Technology Services, the Office of Information Security and the Enterprise Services Office.

Policy and Program Management Office – The Office, which will be led by the Chief Deputy CIO, will be responsible for the information technology performance management and ensuring that the state strategically manages its use of information technology resources to achieve the highest possible programmatic value. The office will be comprised of three IT policy/management focused groups (Program Management; Project Management; and Policy and Strategic Planning) as well as the Administration Group.

- Program Management: Will be responsible for providing primary support for program and project planning, investment analysis, portfolio management and support for agency projects as necessary. In addition, will participate in the development of state IT policies, standards and procedures for project development and management and provide statewide orientation and training on these subjects. The PMO will also ensure standardization in project management processes and project performance metrics for effective project management and uniform project performance assessment. Additionally, the PMO will coordinate and implement project remediation actions.
- Project Management: Will provide the execution leadership for large IT projects, including responsibility for the technology and change management components of IT projects, such as communications about objectives, roles and responsibilities, status and direction.
- Policy and Strategic Planning: Will be responsible for coordinating the development of the Statewide IT Strategic Plan, developing statewide policies and standards for the use and procurement of information technology, managing internal projects and initiatives, and coordinating other planning efforts.
- Administration: Will provide essential services for the administration of the OCIO and its programs, including facilities operations, financial management, human resources, and procurement and contracting.

Office of Technology Services – The OTS, which will be led by the Director of Technology Services[v], will be comprised of two key functional groups focused on technology operations and infrastructure – Data Center & Shared Services and Telecommunications and Network Services.

- Data Center Services: The DCS group will be responsible for core data center operations and services and will be made up of the Operations and Engineering Divisions.
    - Operations: Will provide information technology infrastructure platforms and network connectivity to meet customers' information technology needs 24 hours per day, seven days a week.
    - Engineering: Will install and maintain software and hardware for customers to ensure system reliability, availability and serviceability.
- Telecommunications and Network: Will provide statewide telecommunications services, including strategic and tactical policies and planning for the state to a wide variety of state and local government customers.

Technology Services Board – The Board, which will be chaired by the State CIO, will be responsible for approving the OTS' budget and rates.

Office of Information Security – The OIS, which will be led by the Director of Information Security,[vi] will be responsible for ensuring the confidentiality, integrity, and availability of state systems and applications, and promoting and protecting the privacy of Californians. The OIS will implement enterprise information security and privacy protection policies and practices to safeguard information to ensure the confidentiality, integrity and availability.

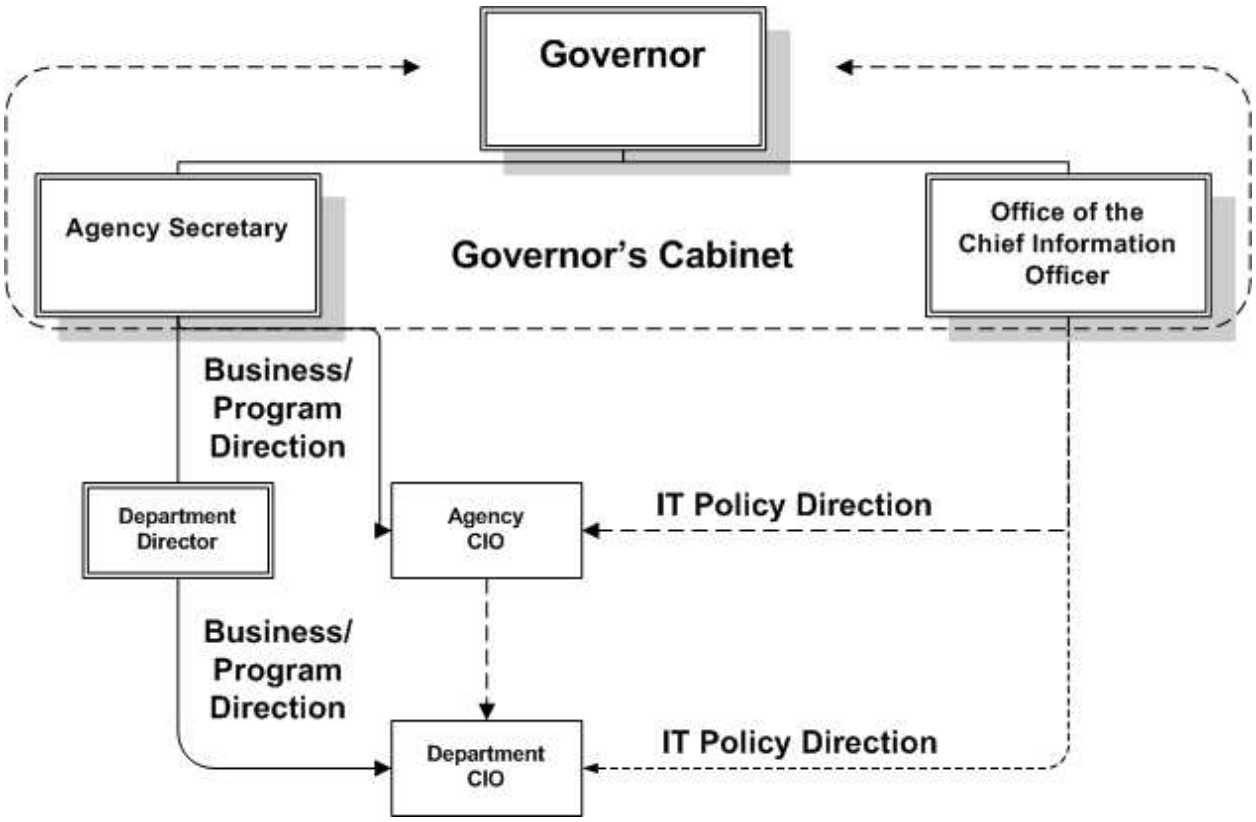
Enterprise Services Office – The ESO, which will be led by the Chief Deputy CIO for Enterprise Services, will be responsible for developing the state's enterprise architecture as well as robust, reliable and affordable enterprise services.

- Enterprise Architecture: Will define, maintain and guide the implementation of the state's enterprise architecture - the statewide roadmap to achieve the state's mission and goals through improving the performance of its core business processes within an efficient information technology environment.
- Enterprise Solutions and Services: Will manage the development and implementation of policy driven technology solutions and services.
- Geospatial Information Systems: Will build and manage the California Geospatial Data Infrastructure as a shared service to enable all state agencies to share the cost of storing, accessing, utilizing and distributing GIS data.
- Human Capital Management: Will be responsible for leading statewide efforts to recruit and retain skilled IT professionals, developing a statewide IT succession/workforce plan, and establishing a comprehensive development, training and performance management program for state IT employees.
- Public Safety Communications
    - Public Safety Communications Services: Will provide engineering and technical support services for public safety related communications systems.
    - 9-1-1 Emergency Communications: Will provide oversight of the 9-1-1 network and approximately 500 police, fire, and paramedic dispatch centers and assist in the administration and funding of 9-1-1 services.

<u>Transferred Functions</u>

This new organizational structure would result in the transfer of all of the functions from DTS, the functions of the Telecommunications Division of the Department of General Services, the information security functions of the OISPP as well as responsibility for information technology procurement policy.[vii]

Figure 5 – Federated Information Technology Governance Framework



Other Roles and Responsibilities in the Federated Governance Framework
When this Reorganization Plan goes into effect, the State CIO will be responsible for providing technology direction to Agency Chief Information Officers (AIOs) and Department Chief Information Officers (CIOs), see Figure 5 above. Specific activities include:

1. Integrating statewide technology initiatives;
2. Ensuring compliance with information technology policies and standards; and
3. Promoting the alignment and effective management of IT resources.

Agency Chief Information Officers (AIOs)/Non-Affiliated Chief Information Officers – AIOs will be responsible for overseeing the management of IT assets, projects, data systems, infrastructure, services and telecommunications, through the oversight and management of departmental CIOs. Each Agency CIO will be responsible for developing an Agency Enterprise Architecture to rationalize, standardize and consolidate IT infrastructure, data, and procedures for all departments within their Agency.

Department Chief Information Officers (CIOs) – CIOs will be directly responsible for all IT activities within the department and report to the State CIO through the Agency CIO for purposes of departmental IT performance management. All departmental employees in IT classifications will report to the Department CIO. CIOs will be responsible for all IT systems, assets, projects, purchases, and contracts and will ensure departmental conformity with the Agency Enterprise Architecture. Department CIOs will also be responsible for:

1. Portfolio management of the department's technology initiatives;
2. Operational oversight of IT functions, personnel and operations, including:
    - Web and application development;
    - Application and database management;
    - Security administration;
    - Telecommunications;
    - Project planning, consulting and management; and
    - Help desk and customer service management.

Chief Information Officers for Departments that are not affiliated with an Agency will have the responsibilities of an AIO, except those responsibilities related to oversight of Departmental CIOs, and the responsibilities of Agency-affiliated Departmental CIOs. Consistent with the federated governance model, the OCIO will work with agencies and departments to implement this operating model in a way that aligns with their business operations.

Other Organizational Changes
The transfer of the information security functions of the Office of Information Security and Privacy Protection (OISPP) to the OCIO that will occur when this Reorganization Plan goes into effect will result in the creation of the Office of

Privacy Protection (OPP) within the State and Consumer Services Agency. The OPP will continue to carry out the consumer focused privacy protection functions of the OISPP.

VI. Benefits of the Reorganization Plan

The federated governance framework articulated in this Reorganization Plan enables the strategic use of both human and IT resources to achieve a higher level of efficiency and effectiveness in the delivery of services, improve accountability and transparency and increase return on taxpayer investment. While this Reorganization Plan is the beginning of the transformation process, it:

Establishes a Single-Point of Accountability for Information Technology

- Integrating resources will result in greater transparency and accountability of operations, a more comprehensive and integrated investment planning process, and significantly improve the output and outcome reporting and analytic information base. This in turn will improve the state's ability to manage IT programs.

Consolidates Key Technology Assets and Policy Functions

- The federated operating model envisioned by this Reorganization Plan will place a premium on developing 'enterprise solutions' that are deployed across multiple agencies while consolidating other technology resources.
- Centralized management and the careful consolidation of systems and storage devices offer the state numerous benefits that include: reduced complexity and support costs, lower error rates, better support for new business applications, improved security, improved business continuity protection, and improved scalability and performance.
- In addition to improved technology and program alignment, increased efficiency and effectiveness, and supporting a statewide and cross-boundary approach, the organizational changes proposed in this Reorganization Plan enable a greater emphasis on data, information and knowledge management, and provide an improved platform for the transformation of government services and operations.

Supports Integrated Business and IT Planning

- Building on the IT Capital Planning Process, this Plan supports a robust integrated business-IT planning process that provides a coherent, repeatable process ensuring the alignment of IT strategy with public priorities and agency business plans. This process will result in a more efficient allocation of resources, with the potential for making more resources available for other policy priorities, as overall IT costs are reduced.

Promotes Data Sharing and Management

- This Reorganization Plan will enable a greater emphasis on data, information and knowledge management, including information sharing among and within agencies as well as information sharing with different levels of government.

Enhances Information Security and Disaster Recovery

- The statewide approach to information security and disaster recovery enabled by this Reorganization Plan will provide a consistent, integrated approach across agencies thereby making individual agencies less vulnerable to security breaches and operational downtime.

VII. General Provisions

This Reorganization Plan is effective on May 7, 2009. On the effective date, the plan shall become operative.

Transfer of Employees
Pursuant to Government Code Sections 12080.3 and 19370, all employees serving in the State Civil Service, other than temporary employees, who are engaged in the performance of functions transferred to the Office of the State Chief Information Officer or engaged in the administration of a law, the administration of which is transferred to the Office of the State Chief Information Officer by this Reorganization Plan, are transferred to the Office of the State Chief Information Officer. The status, positions, and rights of such persons shall not be affected by their transfer and shall continue to be retained by them pursuant to the State Civil Service Act, except as to positions the duties of which are vested in a position exempt from civil service. The personnel records of all transferred employees shall be transferred to the Office of the State Chief Information Officer.

Transfer of Property
The property of any agency or department, related to functions transferred as part of this reorganization, is transferred to the Office of the State Chief Information Officer. If any doubt arises as to where such property is transferred, the Department of General Services shall determine where the property is transferred.

Transfer of Funds
All unexpended balances of appropriations and other funds available for use in connection with any function or the administration of any law transferred by this Reorganization Plan shall be transferred to the Office of the State Chief Information Officer for use for the purpose for which the appropriation was originally made or the funds were originally available. If there is any doubt as to where such balances and funds are transferred, the Department of Finance shall determine where such balances and funds are transferred.

Endnotes

[i] See “50 State Information Summary,” The Pew Center on the States, Government Performance Project, Information Performance Grades. Online at: www.pewcenteronthestates.org/uploadedFiles/Information%20Performance.pdf

[ii] The survey can be viewed online at: cio.ca.gov/Publications/pubs/OCIO%20StatewideITSurveyReport.pdf

[iii] See “A New Legacy System: Using Technology to Drive Performance,” Little Hoover Commission, November 2008.

[iv] See “A New Legacy System: Using Technology to Drive Performance,” Little Hoover Commission, November 2008.

[v] The Director of Technology Services will be appointed by and serve at the pleasure of the Governor, and subject to Senate Confirmation.

[vi] The Director of Information Security will be appointed by, and serve at the pleasure of, the Governor.

[vii] Public Contract Code Sections 12101 and 12103 reference the Department of Information Technology as responsible for IT procurement policy.